

CHOICE

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**Finding the
(almost)-perfect
nappy**

**Artificial
sweeteners:**
are they all safe?

Osteoporosis:
men get it too



**Save
hundreds
— even thousands — on
your car insurance**

MORE TESTS: • 350 L fridges • Cordless drills

Subscribers keep us informed



Jane Mackenzie

With this issue you'll have received CHOICE's annual survey of the reliability of household appliances. These subscriber surveys let us compare the reliability of the different brands for products such as washing machines, dryers, fridges, cooking appliances, TVs, VCRs and computers in our test reports on these products. So your experiences of the breakdown and repair of appliances directly helps other people when they're choosing which brand to buy.

The more brands we can report on, the

better the market is covered when you go shopping. We need at least 50 responses per brand to make the results statistically significant enough to report, so please fill in this year's survey for as many products as you can. Your recent record response to our survey on car reliability has let us include more models than ever before in this year's article (coming soon), and we'd love to have a similar monster mailbag for the appliance reliability survey.

In our recent survey of subscribers' experiences of how your car insurance claims were handled by your insurance company, you told us that practically a quarter of you (24%) had had a problem when making the claim (see page 18 for more on this). While other aspects of satisfaction with the company's claims-handling performance varied from insurer to insurer, this figure was pretty standard across the board.

Three things are important with an insurance policy: the cost of the premiums, what's included in the policy and how the company handles a claim when you make one. CHOICE can assess the policies and research and compare the cost of premiums, but only your feedback tells us — and other subscribers — which companies you're more likely to be satisfied with.

So we'd like to thank you all again for the time you take to fill in the surveys we send you — and will be holding our breath for a record response to the appliance reliability survey you got with this issue.

Jane Mackenzie, Editor

Your letters

We welcome the letters you send us — please always include a daytime telephone number so we can contact you quickly if we want to follow up your letter. We're sorry we can't personally answer every letter we receive, but we do use them in our research. Thanks for taking the time to keep in touch.

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You could pay hundreds — even thousands — more in premiums than someone similar with a different company. And almost one in four readers who claimed on their comprehensive car insurance in the past three years had problems making that claim. We give you the tools to help you avoid being ripped off.

Cover photo: Kent Mears



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We put 12 popular brands of disposable nappy on trial and found one that provides nearly everything parents are looking for ... but at a price. You can also check out the latest state of the cloth vs disposable debate.

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Hearing aids and mobile phones

OUR ARTICLE ON HEARING AIDS IN the January/February 1999 issue of CHOICE prompted readers to write and tell us about problems when using digital mobile phones: people with a hearing aid or cochlear implant may experience a loud buzzing noise or even pain when using a digital mobile phone, or when one is being used nearby. (Analogue phones don't create this problem, but the analogue

system will soon be obsolete.)

The severity of the interference — which can be as loud as 120 decibels — depends on the type of hearing device (in-ear devices are generally less susceptible than behind-the-ear aids); the distance between the hearing device and phone; and the phone reception (if reception is poor, mobile phones generate a stronger signal, which is more likely to cause interference).

One way to lessen the problem is by using a plug-in loopset, comprising a microphone and earphone with telecoil, which allows the phone to be used further away from the hearing device.

But if the interference is coming from someone else's phone, you'll have to move away — or ask them to.

A new standard for hearing aids has been introduced, which aims to minimise interference from

digital mobile phones and applies to all hearing aids manufactured after July 1 this year. This may mean having to buy a new aid — at a cost of around \$2000 to \$4200. However, according to the Deafness Forum of Australia, there's currently no regulatory mechanism to ensure the aids in fact comply with the standard and no other way of knowing whether they do.

If you use a hearing device and want more information on how to overcome problems with mobile phones, contact Deafness Forum, Suite 7b, 17 Napier Close, Deakin 2600. Phone (02) 6281 3934; TTY (02) 6281 3156; fax (02) 6281 4309; email deaforum@ozemail.com.au.



Correction

Dishwashers CHOICE, June 1999

In the table on page 46 we said the **TECHNIKA Ardo LP496** was distributed by Fagor. In fact its distributor is Technica.

Tips & Traps

Australian Securities and Investments Commission (ASIC) and give you tips on how to avoid investment pitfalls. For further information call the ASIC infoline on 1300 300 630 or check its website on www.asic.gov.au.

Over 100,000 Australians lost their money in fraudulent and illegal investments in the last 10 years.

Here we review the latest investment news from the

\$1.3m super fraud

A superannuation agent was recently sentenced to two years' jail after pleading guilty to fraud. As administrator of a wholesale super investment pool, he'd invested super funds from dozens of policyholders with two insurance companies. He then withdrew \$1.3m of these funds for his own benefit.

Because of prompt action by ASIC and the insurance companies, the policyholders didn't lose their money. Without admitting liability, both insurance companies restored the misappropriated funds.

In a different case, which is still before the courts, ASIC alleges that an insurance agent paid his clients' rollover super funds into investment funds he owned or controlled.

How to keep tabs on your super

By January 1999, Australians had saved \$377 billion in super funds. Currently 98% of full-time and 59% of part-time and casual workers are covered by super. Employers usually have to pay 7% of your salary into a super fund, and these contributions may be shown on your pay slip.

Before you invest in a super fund you must be told in writing about the benefits you can expect, how the fund operates and its financial position.

Funds are generally required to send you a statement at least once a year. You must also receive a report when you join or leave the fund and on request.

CHOICE advice

- If you haven't received at least an annual statement, check what's happening to your super. Contact the trustee of the fund and ask for a statement of your contributions. If you use an agent, ask for records of the transactions carried out in your name and request regular reports about your investment.
- Contact the ASIC infoline if you've any queries or complaints about your agent or super fund.
- In most cases you can also complain to an independent complaints resolution scheme. Call the Financial Complaints Referral Centre on 1300 780 885 to find out which scheme is the right one for you.
- For general information on super, contact ASIC to get a free copy of the step-by-step guide *Super Decisions*.

Travel club warning

THE TRAVEL COMPENSATION FUND (TCF) IS WARNING potential travellers to steer clear of unlicensed travel clubs offering cheap domestic and international airfares and accommodation deals in return for upfront membership fees.

The fair trading ministry in WA recently laid charges against one such club, Interval Resort Networks (Australasia), alleging it

made false representations in connection with the promotion of a travel and accommodation network discount scheme. In addition, after paying membership fees ranging from \$3500 to \$20,000, consumers complained they couldn't get the discounts, and holidays couldn't be taken at times that suited them. The travel club is now in receivership.

People spending money with unlicensed travel clubs are not protected by the TCF, which monitors the financial security of all licensed travel agents in

Australia (except in the NT) and compensates anyone who loses money on

prepaid travel services where the agent is unable to offer refunds because of bankruptcy or insolvency.

When you're planning your next holiday, book with a travel agency that's a member of the TCF to ensure you're protected if that agent goes out of business. TCF members can be identified by a blue and gold TCF agent membership certificate, and if

it's not on display, ask whether the agent is a member.

■ If you've lost money due to a travel agent's financial collapse, closure or failure to pass your money on to other travel principals (airlines, hotels, etc), call the TCF claims hotline on 1800 012 024.

National healthy bones week



OSTEOPOROSIS AUSTRALIA AND THE Australian Dairy Corporation are campaigning to raise public awareness of osteoporosis during National Healthy Bones Week, August 8-14.

Osteoporosis is a serious and widespread condition affecting both men and women. Osteoporosis Australia says you can reduce the risk of osteoporosis by:

- Ensuring an adequate calcium intake.
- Taking regular weight-bearing exercise.
- Not smoking.
- Moderating alcohol consumption.
- Considering taking HRT during menopause.

It's never too late to treat osteoporosis —

there are many effective treatments available. Call your state office of Osteoporosis Australia on 1800 242 141 for more information.

■ See page 14 for our special report on osteoporosis.



CHOICE is one of many consumer magazines from organisations worldwide that make up Consumers International. Get the

lowdown on what's happening with your fellow consumers around the world in World Consumer Snapshot.

■ Ammonia cigarettes

US tobacco companies have been lacing cigarettes with ammonia, according to France's *60 Millions de Consommateurs*. Ammonia compounds alter the pH of cigarette smoke and make it easier for nicotine to be absorbed more rapidly into the body, which, in turn, makes cigarettes more addictive. The report cited in *60 Millions* says that ammonia was the secret to the success of Marlboro cigarettes: its makers starting using ammonia in the 1960s, and when it became the leading national brand other cigarette companies jumped on the pH-manipulation bandwagon.

■ Sound advice for a saner society

Switzerland's *Ktip* magazine tells you how to choose the right computer for your needs, including 10 tips for getting it right when you buy one. Most of them were fairly obvious: determine your needs, determine your budget, choose your dealer ... you get the picture.

However, we were genuinely impressed with tip number 9:

“Burn new brochures. Don't look at new brochures once you've bought a PC. The next generation of computers is guaranteed to be faster and more powerful — and usually the same or lower in price.”

■ Surely no-one in Australia will notice ...

Imagine our surprise when we saw Fiona, our home economist and CHOICE cover model from December 1997, in Luxembourg's *de Konsument*.

The article is an exposé of 'free' holidays — the kind where you end up paying a fortune for all the 'extras' like transport, hotel supplements and insurance. Fiona is apparently posing as a Luxembourgian tourist (drinking chardonnay) on holiday in sunny Costa Brava — which, appropriately enough, is about as credible as the holidays themselves.



● YOUR letters

We're always pleased to publish subscribers' letters with useful hints for other consumers.

Roof restoration scams

Thank you for your extremely informative article on the roof restoration industry in the March issue of CHOICE. I've had similar experiences from dealings with roof restoration companies. Our roof is about 25 years old and the tiles are concrete. They're rather badly faded with age.

One of the companies I contacted examined the roof in June last year. The sales rep indicated that he was a qualified engineer and he was of the opinion that the roof would collapse in three months from the excess water absorbed by the tiles. He removed a tile to demonstrate how much water was in it, as there was a water mark on the battens. His best trick was to tell me that because our roof had so badly deteriorated, he couldn't guarantee that his company would be able to save it.

After telling me that the roof wouldn't last, the sales rep then gave me a quote: it would cost over \$10,000 to repair, if we put up an

advertising sign in the front yard. I asked for a formal, written quotation detailing the work that needed to be done, but this wasn't forthcoming. He expected an answer on the spot and wrote the estimate on a piece of scrap paper.

After the shock of being told our roof was going to collapse, I called the tile manufacturer and spoke to its technical representative, who assured me that the tiles don't leak and will last for up to 50 years.

As your article points out, roof restoration is only for cosmetic purposes. There seems to be a proliferation of these companies — thank you for exposing the scam.

Barry Ziegler
Ringwood, Victoria

Thirty-second cash dash

Recently I used an ATM at my workplace to withdraw \$320. After the cash was dispensed I took my Visa card and receipt from the ATM, put them in my wallet and was about to pick up the cash when the drawer closed, taking the \$320 back



All the experts agree that roof restoration is only useful for cosmetic purposes. Tiles aren't porous, and if they're not chipped, cracked or out of place they shouldn't leak.

LETTER OF THE MONTH



We want to hear from you — your experiences help our research and often let other readers know about scams and rip-offs. To thank you for writing to us, *Your Letters* awards a prize of a CHOICE book to the 'Letter of the month'. This month's winner, Ashely Gillen of GyMEA, NSW, receives *Sustainable House* or any other book of his choice from Consumer Bookshelf, pages 40 to 42.

We're sorry we don't have the resources to answer all your letters personally, and in the magazine we

may edit them or print only an extract. See page 2 for how to reach us.

into the machine. I re-entered my Visa card to repeat the withdrawal, but it was disallowed because my \$500 daily limit had been exceeded, even though I hadn't received the \$320.

I phoned my credit union and was told I would have to fill out a special form explaining what had happened and that it could take up to 45 days to credit me back the \$320 that had been electronically debited.

Visa has told me that for security reasons you only have 30 seconds to pick up your money from the ATM drawer. While I fully understand this limitation, because of the non-threatening environment of my workplace I didn't complete the transaction as quickly as I normally would have.

When I commented to Visa that there's no sign on the ATM telling people of this time limit, I was told that it's explained in the brochure you get when you first receive your card. I've spoken to many friends and colleagues and not one of them was aware that you only have 30 seconds to pick up your cash from an ATM.

Why does it take up to 45 days for Visa to correct incorrect debits like this? And why can't ATMs be made more user-friendly? It's no wonder older people are wary of new banking technologies when ATMs are so unforgiving. If ATMs can't be made more user-friendly, perhaps there's a good argument for bringing back over-the-counter banking!

Ashley Gillen
GyMEA, NSW

Wrong medicine

My mother was prescribed antibiotics by her doctor and was told to take two tablets with each meal. After a couple of days she started to feel very ill and noticed that the chemist had given her someone else's tablets.

She went back to the chemist and was told: "Yes, we gave you the wrong prescription, but you should have looked at the name when you signed for them." She didn't have her glasses at the time, but assumed it was her prescription because the

(Continued on page 48)



Shopping on the Web

Want some advice about online shopping?

Here's the goods.

SHOPPING ON THE INTERNET IS THE latest in an electronic future. CHOICE, along with Consumers International (CI) is working towards making it consumer-friendly and secure. CI recently conducted a study of consumer experiences buying on the Internet, purchasing 150 products in 17 countries between November 1998 and February 1999.

The results so far show that online retailers need to provide better information to consumers, and some legal issues (mostly about which country's law applies to the transaction) need to be ironed out. In the meantime, here's how to spot the pitfalls.

The good, the bad, the ugly

Shopping on the Web has advantages and disadvantages (see *Pros and cons*, below right) There's often far more product information available on the manufacturer's website than in the store, so it's useful for researching before you buy. If you like something, shop around retailers' websites for a good price and make sure it's in stock.

The CI study found that while pricing information was clear on most of the tested sites, terms and conditions — a vital aspect of purchasing — often weren't. Overall, only 22% indicated if the item was in stock, and although almost two thirds of the sites confirmed orders, most didn't notify the purchaser when products were dispatched.

If you want to buy from overseas, watch out for shipping costs and slow delivery. Out of 150 products purchased in the CI study, six took more than a month to be delivered, and 11 still hadn't arrived at the time of writing.

Credit only

Got your credit card ready? You'll need it to make the most of online shopping, as the majority of sites CI tested use credit cards as their main payment option. The majority of sites use secure servers, which encrypt any information you send (see *Security blanket*, CHOICE, Jan/Feb 1999), and some will accept non-Internet payment methods. The risks are similar to, say, giving your card number over the phone: only give your details when they provide a

contact number and address, and double-check your credit card statements. At least using a credit card can give you the extra protection many cards offer of reversing the payment if the goods are faulty or you dispute the transaction.

On the downside, few sites (21%) provided additional information about how they used consumers' personal information — for example, selling it on to advertisers.

Legal problems

If you have to return faulty or damaged products, there are legal aspects you need to be aware of.

Few of the sites tested by CI made their complaints or returns procedures clearly available, and a quarter didn't even display a phone number and address. Refunds were generally fast for Australian stores, averaging five days — faster than anywhere else, but at least one Australian shop still hadn't refunded a customer's money 138 days after the product was returned.

If you're returning Australian goods, Australian law applies, but if you buy from the US, for example, there may be disputes over whether Australian or US law applies. CI is trying to ensure consumers know in advance what law will apply, or that the buyer's jurisdiction is used in any disputes. □

The pros and cons of online shopping vs regular shopping

Pros	Cons
Lots of reference material available	You can't try before you buy
Convenient	Unavailable stock may be displayed
You can shop locally, interstate or overseas at any time	Shipping costs may be high
Very little sales pressure	Delivery may be slow

Results of the Consumers International study

Feature	Overall (%)	Australia* (%)
Terms and conditions clearly shown before purchase	27	40
Street address of retailer displayed	72	60
Easy to find complaints procedure	32	20
Clearly shown whether the item is in stock	22	10
Clear when order is completed	92	80
Confirmation of order	64	50

* Based on 10 websites, so this is a snapshot only.



TIPS

- You can use websites to check out products before buying.
- Make sure you know the final price (including shipping) and whether stock is available before finalising the purchase.
- Before buying, check carefully the terms and conditions for purchasing, refunds, and returning goods.
- Though most sites are secure, only give your credit card details to sites with a contact phone number and street address, and check your statements.

Disposable nappies

We put 12 popular brands of disposable nappy on trial and found one that provides nearly everything parents are looking for.

IN BRIEF

■ Children in disposable nappies use between 5000 and 8000 before they're toilet-trained. To find out how well different brands perform, see the table, far right.

■ HUGGIES, the leading brand on the market, outperformed all the other brands in our trial. Unfortunately it's also the most expensive. It'll cost you anything from around \$1300 to \$1750 more than using home-laundried cloth nappies over the 2½ years your baby wears them.

■ To find out how much it'll cost you to keep your baby in disposable or cloth nappies for about 2½ years, see *Some cost comparisons* on page 12.

■ There's no clear environmental advantage in using cloth nappies over disposables. Both have damaging environmental impacts — see page 13.

A PERFECT DISPOSABLE nappy should absorb moisture quickly to prevent leaks and 'lock it in' to keep your baby's bottom relatively dry. It should be easy and quick to fasten, stay closed, and fit various shapes and sizes. And the absorbent material shouldn't shift or disintegrate.

One brand in the trial seems to do all these things, and do them well. We've rarely had such overwhelming endorsement from trialists for one product: HUGGIES Ultra Dry Crawler nappies (for 6–11 kg boys and girls). This brand consistently outperformed all the other brands by a wide margin in all the categories listed in the table, right. To top it off, nearly all the trialists (93%) said they'd be very likely to buy this brand of nappy. The next two brands (BABYLOVE and SNUGLERS) lagged far behind, with 37% and 36% of trialists very likely to buy them. And at the other end of the scale, 36% of trialists said they'd be very unlikely to buy the lowest-rating nappy in the trial (SAVINGS).

Disposables taking over

When we last surveyed the market in 1993, about 40% of all the nappies changed were disposables. Since then the number of people choosing disposables over reusable cloth nappies (in particular for older babies) has increased steadily. According to industry data, last year 76% of all nappy changes made in Australia were with disposables. And the market is expected to keep growing — much to the demise of the traditional cloth nappy.

As the manufacturer of Driglo and Bonds Terry-towelling nappies told us, the number of nappies produced in its factory has declined by about two thirds over the years. The company has stopped manufacturing nappies because it has large stockpiles, and it's not expecting to take up production



Baby Charles and almost 8000 nappies we sent to trialists — which is approximately the number he's likely to use before he's toilet-trained.

again. "It's not a problem affected by imports," said Carolyn Hill, marketing manager of Australian Weaving Mills. "I think it's the same everywhere — people move to disposables."

Absorbency vs bulk

The average disposable nappy weighs around 40 g. The bulk of it (about 60%) is wood pulp. Some of the other materials it contains are polypropylene, polyethylene or bonded carded web for the top and back sheets, and other materials for fasteners, elastic and adhesives.

Many brands also contain polyacrylate, a super-absorbent material in powder form, which can absorb many times its weight in liquid. In contact with moisture, it solidifies into a gel and traps the liquid inside (see the photo, page 12). This gel should remain inside the nappy's core, but for three brands in our test (TARGET, LULLABY, VIP's), some trialists commented that it sometimes became visible and stuck to their baby's skin.

Nappies without super-absorbent material generally

WHAT TO BUY

HUGGIES Ultra Dry Crawler (for 6–11 kg)	\$18.88 for 44
BABYLOVE Medium (for 5–11 kg)	\$20.04 for 60
SNUGLERS Medium (for 5–11 kg)	\$23.89 for 88
BEBES Ultra (for 5–11 kg)	\$5.99 for 20
BABY SITTER Ultra Thin Wipeeze medium (for 5–10 kg)	\$6.88 for 18
VIP's Medium (for 5–11 kg)	\$6.70 for 20
TARGET Daytime medium (for 5–11 kg)	\$18.09 for 80



contain more wood pulp to increase their absorbency. But even in bulkier nappies the material shouldn't shift during use and end up compressed between the baby's legs. Trialists commented on this

aspect for most of the brands that had a 'shifting' score of less than 80% (see the table below).

Keeping baby dry

A number of participants commented on most cheaper nappies' tendency to leave their baby's skin wet or damp. And numerous trialists commented on leakage problems with the **HOME BRAND** disposable, which scored lowest for leaking.

Three of the brands trialled (**BABYLOVE**, **COSIFITS**, **LULLABY**) have a wetness indicator — a picture that disappears when the nappy's wet, which some trialists found very handy.

Staying put

We asked the trialists to indicate how often the nappy fasteners loosened during normal wear. As all brands were rated very well for this aspect, we didn't include it in the overall score.

However, judging from our trialists' comments, staying put isn't all that's important. Many found **HUGGIES** Velcro fasteners easier to use and some noted that some other brands' fasteners (**VIP's**, **SAVINGS**, **BEBES**, **BABY SITTER**, **LULLABY**, **TARGET**) ripped off, tore the nappy or left a mark or rash on the baby's skin.

The trial and the results

A big thank you to the 107 parents and babies from all around the country who took part in our trial of disposable nappies earlier this year.

We bought 12 popular and widely available brands of disposable nappy, medium size, for babies weighing between 5 kg and 11 kg. Then we sent them to the trialists in clear plastic bags so the brands were largely disguised.

Each participant assessed seven brands of nappy, each over two days

(not during the night). They noted how often the nappy leaked, how dry it kept their baby, and how often the absorbent material in the nappy shifted or disintegrated during use. We evaluated the responses and allocated scores for each aspect. The overall score is a combination of all those scores weighted equally. The trialists could also comment on particular aspects they liked or disliked.

Brand (in rank order)	Manufacturer / distributor	Pack size	Average price per pack (\$)	Price per nappy (cents)	Leakage score (%)	Dryness score (%)	Shifting score (%)	Disintegration score (%)	Overall score (%)
HUGGIES Ultra Dry Crawler	Kimberly-Clark	44	18.88	43	98	95	95	97	96
BABYLOVE Medium	APPP (A)	60	20.04	33	89	78	85	88	85
SNUGGLERS Medium	Kimberly-Clark	88	23.89	27	93	79	77	87	84
BEBES Ultra	Naelfran	20	5.99	30	89	73	76	90	82
BABY SITTER Ultra Thin Wipeeze medium	Amir Paper Products	18	6.88	38	87	69	79	87	81
VIP's Medium	Kimberly-Clark	20	6.70	34	93	75	71	80	80
TARGET Daytime medium	Target	80	18.09	23	88	67	77	81	78
COSIFITS Medium	APPP (A)	80	19.86	25	84	60	70	79	74
LULLABY Medium	APPP (A)	80	19.82	25	80	61	76	74	73
NO FRILLS Medium	Franklins	88	19.95	23	82	61	71	73	72
HOME BRAND Panty shaped medium	Grocery Wholesalers	20	4.98	25	74	53	73	84	71
SAVINGS Medium	Grocery Holdings	20	5.36	27	77	56	68	71	68

(A) APPP: Australian Pacific Paper Products.

What hospitals use

To find out which type of nappy hospitals use — and for what reason — we phoned 13 hospitals across the country. The vast majority (11) use cloth nappies, three of these in combination with disposables for premature and special-care babies. Two hospitals were currently reviewing their policy; and one had used disposables in the past and had gone back to cloth.

Those that use cloth nappies mainly do so for environmental (disposal and transport) or economic reasons. The two that had chosen disposables mainly did so for perceived health reasons (better infection control and to keep babies drier).

Size and fit

Although the babies who participated in the trial all weighed between 6 kg and 10 kg, which is appropriate for a medium-size nappy, many trialists commented on the poor fit or sizing of two brands.

The COSIFITS Medium (for 5–11 kg) nappy in particular was regarded as too small. *"It's not as roomy as my normal nappy. I noticed red marks on my baby's leg, indicating that this nappy is nearly too small for her (she's 8 kg),"* one trialist noted.

A number of trialists also commented on the poor fit of the NO FRILLS Medium (for 5–11 kg).

Performance at a price

HUGGIES nappies are made by Kimberly-Clark Australia, a company that manufactures about two thirds of all disposables sold in Australia, including the SNUUGGLERS and VIP's brands. HUGGIES is its most prominent brand — and one of the most expensive on the market.

It seems that in the disposable nappy market, price generally increases with better performance (see *Price per nappy* in the table, page 9). In the most economical bulk size we could find, HUGGIES cost on average 43 cents per nappy, while the six brands that scored less than 80% overall cost under 30 cents. SNUUGGLERS, at 27 cents per nappy, seems an exception to that rule — trialists voted it third overall.

We've included the best of the cheapies in our *What to buy* list: TARGET Daytime disposables scored 78% overall and cost only 23 cents per nappy. While its scores were nowhere near HUGGIES', it matched some of the other more expensive brands' scores quite well and could be an acceptable option if price is your deciding factor.



HUGGIES Ultra Dry Crawler

(for 6–11 kg)

Average price: \$18.88 for 44 (43 cents per nappy).

Good points

- The best-performing nappy by a wide margin — and the one the trialists said they'd be most likely to buy.
 - Trialists' summary: *Very good. No leakage. Very dry. Highly absorbent. Liked outer cover.*
- "Even if this nappy was more expensive, I'd purchase it as it was so dry and needed changing less often than others."*

Bad points

- The most expensive brand in the trial.

FREES UP TIME FOR WORKING MUM



In the first few months after their now 10-month-old son Zachary was born, his parents Judy and Jeff Purkiss of Landsdale, WA, used traditional cloth nappies. But when Judy started part-time work, they switched to disposables.

"To free up time," said Judy. "It's a lot easier now." They tried a few brands and then stayed with HUGGIES. Judy likes this nappy's 'breathable' cover and thinks it helps speed up the recovery time when Zachary has mild nappy rash. (The cover is made from polypropylene and laminated with a special polyethylene film.)

Although Judy is very happy with her choice of nappy, she'll probably use cloth ones again in the first months if she has another baby. "There are so many nappy

changes, disposables would get too expensive," she said. And unless a few of the other brands she tried during the trial were "a lot cheaper", she won't change her preferred brand.



Since the first one-piece disposable Snugglers nappy (left) was launched in Australia in 1972, disposables have become thinner, lighter, more absorbent, better fitting and easier to fasten. A current Snugglers nappy is pictured in the middle. According to the manufacturer, the current Huggies nappy (right) is now half as bulky as in the past. The design of the nappy has been improved overall and more super-absorbent material added to the wood-pulp core.



BABYLOVE Medium

(for 5–11 kg)

Average price: \$20.04 for 60 (33 cents per nappy).

Good points

- Second-best overall and for staying in shape.
- Good for keeping your baby dry, and very good for not disintegrating.
- The most absorbent nappy in our absorbency test.
- Wetness indicator.
- Trialists' summary: *A good nappy generally. Nice fit. "Overall it was excellent, and the disappearing fish was a good idea, especially for people like my husband who can't see that a nappy is full!"*

Bad points

- Trialists' summary: *Required more regular changing.*



SNUGLERS Medium

(for 5–11 kg)

Average price: \$23.89 for 88 (27 cents per nappy).

Good points

- Very good overall.
- Second-best for keeping your baby dry and equal second-best for preventing leaks.
- Trialists' summary: *Baby stayed dry. Very absorbent.*
- "Wouldn't use it overnight, but it's OK for daytime wear, with regular changes."

Bad points

- Trialists' summary: *Required more regular changing. Material shifted/compressed during wear.*



BEBES Ultra

(for 5–11 kg)

Average price: \$5.99 for 20 (30 cents per nappy).

Good points

- Second-best for not disintegrating.
- Trialists' summary: *Performed well. Absorbent. "Performed well overall, the only fault with it was the absorbent material shifting at times when wet."*

Bad points

- Trialists' summary: *Material shifted/compressed during wear. Fasteners left marks on baby.*



BABY SITTER Ultra Thin Wipeeze medium

(for 5–10 kg)

Average price: \$6.88 for 18 (38 cents per nappy).

Good points

- Good for staying in shape.
- Trialists' summary: *Good overall. Good shape. Comfortable.*
- "A very thin nappy that doesn't seem to hold much. However, it's a good size and the elastic design is good."

Bad points

- Trialists' summary: *Leaked. Made baby's skin sweaty. Had to change frequently. Wouldn't use overnight.*



VIP's Medium

(for 5–11 kg)

Average price: \$6.70 for 20 (34 cents per nappy).

Good points

- Equal second-best for preventing leaks.
- Trialists' summary: *Generally good. Absorption OK.*

Bad points

- Trialists' summary: *Too bulky/thick. Absorbent material clumped in the middle. Left absorbent gel on baby's skin. Fasteners are hard to use.*
- "This nappy was particularly bulky, which could potentially cause discomfort."



TARGET Daytime medium

(for 5–11 kg)

Average price: \$18.09 for 80 (23 cents per nappy).

Good points

- One of the cheapest nappies in the trial, and performed better than the other nappies in the lower price range.
- Trialists' summary: *Quite a good nappy. "This one wore well."*

Bad points

- Trialists' summary: *Required more regular changing. Absorbent material visible or found on baby's skin.*

How absorbent?

While our trialists were busy assessing which disposable nappy they liked best, we tested in our laboratory how much liquid they can absorb.

All brands tested performed pretty well, absorbing around 1.5 L or more of liquid — that's more than six 250 mL baby's bottles. However, there's clearly more to a good nappy than how much liquid it can absorb, because the trialists' ratings for leakage and dryness didn't match up with our simple measurements of absorption.



In our lab test, the most absorbent brand (Babylove Medium) could hold more than 2 L of liquid — about half a litre more than some of the others. Of course, this amount is only theoretical — you wouldn't let the nappy get that soaked when your baby was wearing it.

Some cost comparisons

To give you an idea of the costs of keeping a baby in nappies over an average of 2½ years (day and night-time use), we've costed below seven scenarios for the various types of nappy options.

Choosing cloth nappies and washing them at home is obviously the cheapest option. Over 2½ years you can save the most — money and costs to the environment — by choosing a cold wash and a cheaper detergent, and drying the nappies on the line. You can save even more if you only soak and rinse them, according to the instructions for using Napisan.

- Over the 2½ years, washing the nappies in cold water will cost you around \$30 less than in warm and \$65 less than in hot water.
- Choosing a cheaper washing powder can save you about \$300.
- Drying the nappies in an electric clothes dryer will cost you about \$82 — more if you leave them in for longer than required.

Of course, adding a fabric softener to the rinse cycle or washing just a few nappies on a full-load cycle will increase the costs further.

	1 Home laundering (average 9 nappies washed per day)			2 Disposables (average 6 nappies per day)		3 Nappy wash service (average 60 nappies per week)	
	Scenario 1	Scenario 2	Scenario 3	Cheap brand	Expensive brand	Lowest quote	Highest quote
Soak	Warm water and Napisan	Warm water and Napisan	Warm water and Napisan				
Wash temperature	Cold	Warm	Hot				
Detergent (A)	Biozet Conc.	Biozet Conc.	Drive				
Dry	On the line	Electric dryer	Electric dryer				
Weekly cost (\$) (B)	4.50	5.25	7.85	9.65	18.05	16.90	28.00
Cost over 2½ years (\$) (C)	585.00	684.00	1020.00	1256.00	2348.00	2197.00	3640.00

(A) We chose the detergent that performed best in our last test and one of our Best Buy concentrates, which generally work out cheaper per wash.

(B) Rounded to the nearest five cents.

(C) Rounded to the nearest dollar.

1 Home laundering

All the home laundering scenarios are based on washing nine nappies a day (a few more than for the disposable scenarios, as they're less absorbent) in a top-loading washing machine with automatic water-level sensor. (As babies get older, they tend to use fewer nappies, so the total cost for the 2½ years could be a little lower.)

When water is heated in our scenarios, it's

using an off-peak electric water system; gas heating would cost about the same, whereas using an electric continuous-storage water heater would cost considerably more. Water and electricity rates were taken as an average of those in all state capitals.

Included in all home laundering scenarios is the cost of buying three dozen nappies; excluded are accessories such as pilchers and pins, and the water costs for flushing the solids down the toilet, as you'll also incur this cost with disposables.

2 Disposables

The prices for disposables are based on the lowest (23 cents per nappy) and highest (43 cents) in our trial, bought in the most economical bulk size we could find. The water costs for flushing the

solids down the toilet are excluded, as they'd be the same as for cloth nappies washed at home.

3 Nappy wash service

This is based on 60 nappies a week, a number suggested for a newborn baby by the majority of the 26 nappy wash services we contacted for a quote. As they get older, babies tend to use fewer nappies, so the total cost for the 2½ years could be a little lower. Excluded are accessories such as pilchers and fasteners.

Many services offer special introductory prices or discounts for longer-term bookings. Prices usually include delivery and pick-up, and a bin for the nappies.

Nappies and the environment

The picture of little Charles among a sea of disposable nappies on page 8 isn't just an effective photo. It's all the nappies we used in the trial which, coincidentally, corresponds to the number he'll need (between 5000 and 8000) to see him through his first years until he's toilet-trained. A lot of nappies indeed — and a lot of waste to be disposed of.

If you use an average of six nappies a day, they will produce, in the 2½ years or so your baby wears them, about 734 kg of solid waste.

According to statistics from nappy manufacturer Kimberly-Clark and the NSW Environment Protection Authority (EPA), the solid waste produced per year by the more than 800 million disposable nappies used in Australia amounts to 111,220 tonnes. Considering that most of our domestic waste is sent to landfills, it requires about 145,000 cubic metres of landfill space. That's a lot of waste and space that could be saved if we used fewer disposable nappies.

As a proportion of our total urban solid waste (which includes municipal, commercial, industrial, building and demolition waste), disposable nappies make up about 0.71% by weight (or 1.24% by volume), and 2% and 3.5% respectively as a proportion of our domestic waste.

So, if you object to buying products that create a lot of waste, disposable nappies aren't for you. They're obviously a bigger culprit than cloth nappies in terms of solid waste disposal.

However, cloth nappies also have environmental impacts, albeit in different areas. Over the last decade, various studies and lifecycle assessments (which evaluate the impact of a product through its manufacture, use and disposal) have assessed the environmental impact of disposable and cloth nappies, but with conflicting results. These studies have often been funded by manufacturers of disposables or environmental pressure groups seeking to ban their use — and have shown a tendency to prove their sponsor's viewpoint.

Assigning values or priorities to the different environmental impacts is just one of the difficulties encountered. Who's to say what's more damaging? To create more solid waste? To use more water and energy? To produce more emissions into the air and into waterways?

As the NSW EPA points out: "The disposal of baby wastes by whatever means is damaging to the environment. Both cloth and disposable nappy systems impact adversely on the environment, but the available studies seem to indicate that there is no clear environmental advantage between the two."

The bottom line

■ **Disposables** are more convenient than cloth nappies, especially when away from home, but they produce a lot of waste. They don't require accessories such as pilchers or fasteners, but have to be bought regularly and are much more expensive than cloth nappies washed at home. They're more absorbent and tend to keep your baby drier.

As far as nappy rash is concerned, some medical evidence suggests that high-quality disposable nappies with absorbent

polymers may reduce the incidence of more severe nappy rash. Other studies suggest that it's more important how clean the nappy is rather than what it's made from. To prevent nappy rash as much as possible, all types of nappy should be changed regularly.

■ **Cloth nappies washed at home** create little solid waste but use more water and energy. They're much cheaper than disposables, but require some time to maintain. Apart from a few dozen cloth nappies, you'll also need accessories such as pilchers or fluffy overpants, a fastener or pins, and perhaps disposable or reusable nappy liners.

One of the most important advantages of cloth nappies is that their most significant environmental impact occurs during the use (rather than the production) stage of their lives — so you can minimise that impact by changing the way you wash them. For example, wash them in cold or warm water rather than hot and dry them on the line when possible.

Cloth nappies are available as terry towelling, flannelette or muslin squares or fitted, panty-shaped nappies.

■ **Cloth nappies from a nappy wash service** are great for people who prefer cloth over disposable nappies but still want convenience. It'll save you time, wear and tear on your washing machine and dryer, and electricity and water costs. While it'll end up much more expensive than home laundering (see *Some cost comparisons*, far left), using a nappy wash service is generally less environmentally damaging due to economies of scale.



SOME CHEAPER BRANDS OK

At home, Donna and Tony Maurer of Canberra mostly use cloth nappies for their one-year-old daughter Amber — both the traditional terry-towelling squares and fitted cloth nappies.

"Fitted nappies don't hold as much, but they fit nicely and when Amber was little, they allowed her more freedom to move her legs," said Donna. But at night and when they're out, they prefer disposables — **HUGGIES**.

"Because they're advertised most, I thought they must be OK," Donna said when asked why she chose this brand. She had tried two others — one cheaper and one home-delivered, which was about as expensive as **HUGGIES** — but wasn't as satisfied with their performance.

The trial gave Donna the opportunity to check out more brands. "The worst one we tried was horrible and fell apart after an hour's wear, but with the best one Amber could go three to four hours without getting her bottom wet," she said.

In future, Donna will continue using cloth nappies at home — for environmental reasons — and **HUGGIES** during the night, but she might switch to a cheaper disposable brand for daytime use when they're out. "I was surprised at how good they were," she says.



*Will wild yam cream
prevent osteoporosis?
What about soy
beans? We sort the
myths from the facts.*



Osteoporosis: *facts and myths*

IN BRIEF

■ Exercise, calcium and hormones all play an important role in preventing osteoporosis.

■ It's never too late to start: you'll always be able to do some good, no matter how old you are.

■ The best food source of calcium is dairy food, but if you can't — or don't want to — eat dairy products, check with your doctor whether you need a supplement.

OSTEOPOROSIS LITERALLY MEANS porous bones: bones that are not as dense and strong as they should be, thus making them easier to compress and break. Visible symptoms include spine deformities, such as 'dowager's hump', and decreasing height. But the primary concern with osteoporosis is the relative ease with which fractures occur — particularly debilitating ones like hip fractures (see *Hip fractures: some statistics*, page 17).

How it happens

Bone is living tissue in a constant process of renewal. In childhood and adolescence more bone is normally formed than lost. Our bone mass reaches its peak in late adolescence or early adulthood, and there's evidence that exercise and dietary calcium intake in childhood and adolescence influence our peak bone mass. However, after we reach our mid-30s, the amount of bone lost is greater than the amount renewed.

Sex hormones — oestrogen in women and testosterone in men — play an important role in bone formation and breakdown. As we get older, the rate of bone loss increases as hormone production slows down. In women, this process accelerates in the first five years of menopause due to the sudden drop in hormone production. Other reasons for hormone deficiency in women are hysterectomy — if it includes removal of the ovaries — and excessive dieting and/or exercise that leads to amenorrhoea (cessation of menstruation).

Men with testicular failure (known as hypogonadism) are at increased risk because of low testosterone levels, while alcohol abuse and long-term use of corticosteroids are other major contributors to osteoporosis in men.

Who's at risk?

When they're over 60, more than half of all Australian women and a third of men will be affected by osteoporosis, according to Osteoporosis Australia.

Some are more likely to get it than others, including those who:

- Have a family history of osteoporosis or fractures in old age.
- Are of Asian or Caucasian descent.
- Are taking certain medications long-term, such as corticosteroids (which may be for treatment of asthma or allergies), excessive thyroid replacement hormone and anti-coagulants.
- Have a low body weight (for your height) — which means you're more likely to have low bone mineral density. Furthermore, you probably have less 'padding' (fat and muscle), which increases the vulnerability of your bones if you fall.
- Have low hormone levels through age or a medical condition — oestrogen for women, testosterone for men.
- Are female and have an early menopause.
- Have poor nutrition, including not enough calcium and too much salt and protein.
- Drink excessive alcohol (more than two or three standard drinks per day).
- Don't exercise enough (a particular problem for housebound people).
- Smoke.

Prevention and treatment — the facts

The roles of exercise, calcium and hormones in developing and maintaining healthy bones have been well studied and widely accepted among medical practitioners and the scientific community. However, some misleading and contradictory claims are being made and, of course, there's the usual array of quack-medicines and magic potions to cure the disease (see *Myths and misinformation*, page 16).

Exercise

People who exercise regularly are likely to build up a greater peak bone mass than those who don't, and therefore develop a greater buffer against bone loss in later life. But exercise at any age is beneficial; and while it may not help build bone mass it can help prevent further bone loss.

Weight-bearing exercise — exercise where your skeleton takes the full impact of gravity and your body's weight — is particularly good for building bone strength. Such exercise includes brisk walking, dancing, golf, weight training, jogging and tennis.

Non-weight bearing exercise, such as swimming, cycling and yoga, isn't quite as good, although the action of your muscles pulling on the bones has some effect on building bone density.

Physical activity also helps develop muscle strength, co-ordination and balance, and this can help prevent falls that can cause bone fractures.

There can be such a thing as too much exercise,

especially for girls and women. Excessive exercise can result in irregular or no menstruation, which reduces the production of oestrogen. This, combined with low body weight and a restricted diet (particularly in sports like gymnastics and ballet) can result in lower than normal bone density.

Nutrition

Having a balanced diet and maintaining a healthy weight will go a long way to preventing health problems.

Important nutrients are:

■ Calcium

Calcium plays a critical role in bone growth and maintenance, and it's important to include good sources of calcium in your diet; the best are dairy foods. If there's a chance you're not getting enough calcium from food, you may need to talk to your doctor about taking a supplement. (See *Boning up on calcium* in CHOICE, August 1997, for more on sources of calcium, supplements and your daily requirements.) If you prefer to use soy products instead of dairy products, check the label to make sure calcium has been added.

Menopausal women need more calcium because they're not only losing an increasing amount, they're also absorbing less. Men also lose more calcium as testosterone production decreases.

■ Vitamin D

Vitamin D is important for calcium absorption, and deficiency causes faster bone loss and increased risk of fractures. We get vitamin D from exposure to sunlight, but elderly people who are housebound or hospitalised may not get enough. If you're at risk of vitamin D deficiency, your doctor may recommend a supplement. But don't self-prescribe it: taking too much won't help treat osteoporosis, and may be harmful.

■ Protein

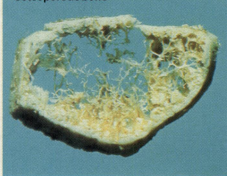
Protein increases calcium loss, but it's unlikely to have an effect on your overall calcium levels if your calcium intake is adequate. People who eat a lot of meat (more than 250 grams per day) will probably

Your bones comprise a hard outer shell covering a tissue resembling honeycomb (below left). As osteoporosis develops, the outer shell becomes thin and weak and the 'honeycomb' develops larger holes (right), weakening bones and increasing the risk of fracture.

Normal bone



Osteoporotic bone



Pictures courtesy of Osteoporosis Australia

The gravity of the situation ...

Gravity may be our enemy when it comes to wrinkles, cellulite and varicose veins, but it's definitely a good friend to our bones. Studies of cosmonauts have shown that they lose about 1% of their bone mass per month for the duration of their missions. The loss stops within one month back on earth, but scientists don't know yet whether the bone recovers completely. CHOICE recommends you avoid unnecessary space travel.

need more calcium than the recommended daily intake or, preferably, to eat less meat.

■ Other minerals

Other minerals important for bone health are magnesium and phosphorus. Magnesium is said to play a role in calcium absorption, but it's extremely unlikely you won't be getting enough of it in your diet.

Phosphorus also plays a role in calcium management in the body, and too much of it interferes with calcium absorption. It's particularly high in foods that contain a lot of protein or have been highly refined, like some junk foods, so people who eat a lot of this sort of food may need more calcium to compensate for the high phosphorus.

Hormones and alternatives

Hormone replacement therapy (HRT) is often promoted as the first line of treatment for osteoporosis in women. Alternative drugs with a similar benefit include selective oestrogen receptor modulators and



If HRT isn't for you, there are pharmaceutical alternatives offering similar benefits for preventing and treating osteoporosis.

bisphosphonates. You may also need to increase the amount of calcium in your diet.

It's best to talk to your doctor about HRT and the alternatives, and decide if any is appropriate for you. You'll need to have regular check-ups to monitor the effectiveness — and possible side effects — of the medication. Bear in mind that HRT and its alternatives are long-term treatments and if you stop taking them the effect on bone density will also stop.

■ Hormone replacement therapy (HRT)

Women: HRT has been shown to prevent bone loss and sometimes increase bone mineral density in postmenopausal women with established osteoporosis. HRT can also help with other symptoms of menopause, such as night sweats, vaginal dryness and hot flashes. It may also reduce the risk of heart disease. However, there's some evidence that it increases the chance of breast cancer, and your doctor may recommend that you don't use it if there's a family history of breast cancer.

At this stage, the long-term effects of HRT aren't well known, and the balance between its benefits and potential long-term risks is unclear.

Men: Although testosterone production doesn't suddenly drop, as oestrogen production does in menopausal women, men's hormone levels gradually decline with age. There's evidence of the benefits of testosterone replacement therapy in aging men, but there are concerns about its side effects on the cardiovascular system and prostate.

■ Selective oestrogen receptor modulators (SERMs)

SERMs are chemicals that mimic oestrogens in particular parts of the body. This means you can benefit from the positive actions of oestrogen, including preventing osteoporosis and coronary heart disease, without suffering negative effects, such as a possible increased risk of breast cancer. It's just as effective as oestrogen replacement therapy for treating osteoporosis, but doesn't reduce certain menopausal

Myths and misinformation

Osteoporosis is a multi-million dollar industry — and growing rapidly. There's abundant scientific evidence that shows the effectiveness of calcium, HRT and exercise in helping to prevent or slow the rate of osteoporosis. However, there are a number of potentially dangerous quack cures and myths and other misleading information in circulation that contradict this evidence. Some examples of this misleading information include:

■ Progesterone creams cure osteoporosis

Progesterone creams — usually 'natural' ones, such as wild yam cream — are promoted by some alternative health practitioners. Progesterone doesn't appear to play a role in bone health, and evidence suggesting the creams have any benefit is very weak.

■ Phyto-oestrogens prevent osteoporosis

There's been a lot of publicity about the benefits of so-called phyto-oestrogens, particularly soy products, for reducing the symptoms of menopause and osteoporosis. Proponents of this theory point to the low rates of osteoporosis in Asia, linking this to a diet high in soy products.

While it's true that phyto-oestrogens help some women with menopausal symptoms, it's unlikely that most people would get enough from their diets to have a significant effect on osteoporosis.

■ Milk causes osteoporosis

Studies showing that people from northern Europe and North America (who eat a lot of dairy foods) have higher rates of osteoporosis than people in Asia (who eat little dairy food) have led to claims that dairy foods cause osteoporosis — despite their being a good source of calcium.

Like the phyto-oestrogen hypothesis, this is largely circumstantial and ignores lifestyle factors in the west that influence the likelihood of osteoporosis, such as smoking, drinking, high protein and sodium intake, sedentary jobs and car dependence.

symptoms such as hot flushes.

One such drug is **raloxifene**. Short-term studies have shown that it does indeed preserve bone density and reduce blood cholesterol, but longer-term studies are needed to confirm its benefits.

■ Bisphosphonates

Bisphosphonates are compounds that prevent the breakdown of bone. **Etidronate** and the newer, more potent **pamidronate** and **alendronate** have been found to increase bone mineral density in menopausal women, including those with established osteoporosis. Studies show that the effects of bisphosphonates on bone density are almost as good as, or even comparable to, HRT, which potentially makes them an effective alternative.

The main disadvantage is that they're expensive, and some of them have gastrointestinal side effects, such as acid reflux (heartburn). You also have to follow the directions for use very carefully: some have to be taken on an empty stomach with lots of water, and you can't eat or lie down for half an hour afterwards.

Bisphosphonates haven't been widely studied in men, but there's limited evidence suggesting they help increase bone density.

■ Calcitriol

Calcitriol is a synthetic form of Vitamin D and has a powerful effect on the absorption of calcium from the intestine. Malabsorption of calcium is said to be a common feature in people with osteoporosis and calcitriol is being increasingly used in severe cases. Too much of it can cause high levels of calcium in the blood, so it's important not to exceed the prescribed dose.

Reducing the risk of falls

Older people may lose their sense of balance and co-ordination, increasing the risk of a fall and fractured bones — the most serious consequence of osteoporosis. Lack of exercise, some medications and deteriorating vision contribute to the risk of falling.

There are a number of steps older people can take to reduce the risk of falls, including:

- Exercise to increase strength, balance and co-ordination.
- Make your home safer. You can do many things to help prevent falls in the home, such as installing handrails in the bathroom, having good lighting in and around the house, and non-slip treads on steps.
- Talk to your doctor about the medications you're taking. Some, such as sedatives, tranquillisers and blood-pressure medication, may affect balance and co-ordination — particularly if you're taking several different ones.
- Wear stable, non-slip, comfortable shoes and look after your feet.

Hip fractures: some statistics

- In 1994, 14,900 Australians suffered a hip fracture, and this number is expected to grow in future years.
- The healthcare system spends about \$1 billion per year as a consequence of osteoporotic fractures. Add to this the personal and indirect costs of pain and loss of mobility to patients.
- Fifty per cent of people with hip fractures suffer permanent disability, and are subsequently often unable to lead independent lives. Between 20% and 26% remain in nursing homes for the rest of their lives.
- A study in northern Sydney found 24% of people suffering a hip fracture died within the following year — a rate about five times higher than people of a similar age with no hip fracture.

■ Have regular eye tests.

Contact the Independent Living Centre in your state for more comprehensive advice on how to reduce the risk of falls both inside and outside the home.

It's never too late to start

Ideally, preventing osteoporosis through diet and exercise should start in childhood. Eating enough calcium rich foods and taking regular physical activity in early life are likely to help your peak bone mass reach its full potential. Keeping this up through adulthood should also help prevent or minimise osteoporosis, as will a healthy lifestyle — not smoking and not drinking too much alcohol.

However, it's never too late to treat low bone density, and preventing bone loss with calcium, exercise and HRT has been shown to help prevent the rate of fractures. □

Further information

Osteoporosis Australia can provide useful health and lifestyle information on the prevention and treatment of osteoporosis. Phone them on 1800 242 141.

Calcium and exercise contribute greatly to good bone health no matter what your age.



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or replacing your car, even if you're at fault, plus the extra features described in *What's covered* (see right). It's the best option if you want more cover for your own car as well as the damage you cause.

If you're interested in insurance for third-party property or third-party property, fire and theft, go to Step 4, page 22, to find out how to get your money's worth, then read on about how to buy insurance and make a claim.

Step 2: How much you should insure for

The amount you insure your car for will dictate the premium you pay and will be the amount you can expect to receive if the insurer decides it's not worth repairing — it's 'written off'. There are two ways of specifying the sum insured — by market value or by agreed value.

■ **With market value** the amount you receive will be determined by how much you could buy the car for at the time you make a claim — its replacement value. Usually, as your car ages, you can expect its replacement value to decrease as the value or condition of the car decreases, so your cover is reduced over time.

■ **An agreed-value policy** allows you and the insurer to set the value of the car. Because the amount is fixed from renewal for a year you have a clearer idea of what you would get if the car is written off. An agreed-value policy may be more expensive.

If you think your car is worth more or less than the market value, for example if it's done more or fewer kilometres than others of its age, an agreed-value policy may suit you.

If you're considering an agreed-value policy, make sure you reassess the value of the car each year when you renew your policy and maintain the car thoroughly. If there's rust, significant deterioration or if the car hasn't been maintained properly, the insurer may reassess the value of your car and your payout may be less than you'd expected.

The majority of the companies we looked at offer the choice of either market or agreed value (see the table on page 21 for details).

Step 3: Know your policy

Our survey showed that the better you understand your policy, the less likely you are to have problems when you make a claim. Just over half the respondents (51%) said their policy was easy or very easy to understand, so it's well worth taking the time to go over your cover.

What's covered

AMP Car Insurance Options and GIO RoadCover Basic are basic policies for a cheaper price that don't go much beyond the minimum cover for accident repairs, fire and theft. Other policies offer extras such as:

☑ Car hire if yours is stolen

Most of the policies we looked at provide for hiring a similar car if yours is stolen. It's limited, either to a set amount of time, usually 14 days, or a dollar limit that could be up to \$1000. NRMA only offers discounted, rather than free, car hire, while GIO (in NSW, ACT and WA), RAC, SGIO and WESTERN QBE (in WA) don't offer any car hire. TIO and GIO in the Northern Territory only give you car hire if your car has been missing for three days.

☑ Car hire if you're in an accident

NRMA, SUNCORP-METWAY and GIO RoadCover (in Victoria) automatically include this in the policy. AAMI, FAI and RACT offer it as an option you pay extra for. You get 14 days' car hire, except from AAMI, which gives 10. For NRMA, car hire is free if you're not at fault, or discounted if you're responsible for the accident, while GIO RoadCover has a \$30 a day limit.

☑ Treatment of windcreens

Most companies don't change your no-claim bonus (see page 22) if you make a windscreen claim. Some companies offer this if you pay for the optional windscreen protection. Others allow one such claim per year. Check if the company waives the excess or gives you a reduced excess for a windscreen claim, and if the same treatment applies to other windows in the car.

☑ Cover for substitute cars

Most of the companies we looked at give you third-party property cover if you're driving a substitute car while yours is off the road — such as a car on loan from a mechanic. The exceptions are TGIO, HBA, MUTUAL COMMUNITY and RACV. DIRECDIAL only covers a friend's car, while AAMI only offers this cover for its own hire cars.

☑ Personal property

If your personal property is damaged, for example during an accident, most companies include its replacement in the claim. It's important to read the fine print, though: most don't cover cash, some pay



Given how important your car insurance brochure is, an easy-to-read policy is essential, but no single company had the perfect brochure. AAMI and NRMA did better than average at explaining no-claim bonuses, and NRMA again at explaining the implications for young drivers.

CAR INSURANCE

Who's missing?

MERCANTILE MUTUAL, ZURICH, CIC and COLONIAL are currently reviewing their policies, so were unable to give us information. CUNA has sold its car insurance business to CIC. VACC recently changed hands, and SUNCORP-METWAY declined to provide information for its policies in NSW. AMP didn't give us price quotes for its Car Insurance Options policy.

only pay if your car is stolen or in an accident, and the dollar limit ranges from \$200 to \$2000. This isn't offered by GIO (except GIO RoadCover in Victoria), RACV, HBF, RAC in WA, SGIO, SUNCORP-METWAY and WESTERN QBE.

✓ In an emergency

Most insurers offer something to cover the cost of emergency repairs and towing, or travel and accommodation, either as part of the policy or through a roadside service that comes with the policy. The best policies we looked at would pay for overnight accommodation, or the cost of continuing your journey. With some companies the cover you get depends on how serious the accident is, for example if the driver is hospitalised.

What's not covered

It's vital to know what your insurer won't pay for. Most don't cover mechanical, structural or electrical failures not caused by a crash, or damage because the car is old, poorly maintained or rusty. Damaged tyres are usually not covered (unless it's in an accident), but if an accident is caused by a puncture or blowout, it's likely the insurer will pay for the damage done but not the cost of replacing the tyres.

If you make any unauthorised modifications to your car, such as changes to the transmission or engine, mag wheels or tinted windows, the insurance company probably won't pay for any damage to the modified part and may not even pay for damage to any part of the car. What's more, the company may decide to cancel your insurance (see *Can your insurer walk away?*, page 22, for more details) because the modification could mean the car has a higher risk of theft or accident, or may compromise the safety of the car.

Other common exclusions are if your car is deemed unroadworthy, or the driver is unlicensed or driving under the influence of alcohol or other drugs.



Guide to the policy features table

All the information given in this table assumes the car will only be used privately.

1 Agreed or market value?

How the value of your car will be determined if it's written off. See Step 2, page 19, for more information.

2 Excess options

(✓) indicates you can choose a higher or lower excess that will either decrease or increase your premium cost. See page 23 for more on excesses.

3 Who arranges quotes? Who decides where repairs are done?

Whether you want to organise quotes and make the decision regarding where repairs are done yourself will depend on your circumstances. 'Either' means you can choose to make the arrangements or leave it to your insurer.

4 Who is responsible for the quality of repairs?

While all the companies we looked at told us they'd help in some way if there was a problem with the repairs done as part of a claim, 'Insurer' in this column means the insurance company will accept responsibility for the quality of repairs. However, in some cases (shown by footnote Q) this is only if you've used a nominated repairer.

5 Policy score

Policies were scored on the attributes that we consider make up a good policy (see Step 3 on page 19 for more details). These features include:

- Car hire if your car is stolen or in an accident.
- What happens to your no-claim bonus and excess if you make a claim.
- Do you lose your no-claim bonus and/or have to pay an excess if you make a windscreen claim?

- Third-party property cover for a substitute car.
- Cover for personal property.
- Additional assistance in an emergency, including cover for repairs, travel, accommodation and transporting your car.

Footnotes

- (A) Not available if you're 25 or under or have an under-25 driver who uses the car 20% or more of the time.
- (B) Available if you're 55 or over.
- (C) Available if you're a member of the Council on the Ageing.
- (D) Not available to men 22 years old or under.
- (E) Available to members only.
- (F) Suncorp-Metway policies are also available in NSW, but no information was provided by the company.
- (G) Depends on the age or value of the vehicle.
- (H) Vehicle must be less than 10 years old for agreed value.
- (J) Vehicle must be less than 10 years old or insured for more than \$7000 for agreed value.
- (K) If the policyholder agrees to use a repairer recommended by the insurer, only one quote is needed.
- (L) Only one quote required.
- (M) Two quotes are required. One must be obtained from an AAMI-recommended repairer.
- (N) Insurer if the car is undrivable.
- (P) No quotes needed if using RACV accident repair centres. One quote needed if using RACV's insurance crash repair network.
- (Q) Providing it's a repairer recommended or authorised by the insurer.
- (R) No quotes needed if taken to an SGIO Quality repairer.
- (S) The insurer hires a company to assess the repairs.
- (T) Policyholder can state a preference.
- (U) If the repairer isn't a nominated RACV repairer, the repairs have to be assessed and authorised by RACV. When repairs have been authorised, RACV takes responsibility for them.

Policy features

Policy features			1	2	3	3	4	5	
Company / policy (ranked by policy score)	States available	Contact	Agreed or market value?	Excess options	Who arranges quotes?	Who decides on repairs?	Responsible for quality of repairs	Policy score (%)	
AUSTRALIAN ALLIANCE (A)	All but NT	13 25 55	Either	✓	Either	Assessing firm (S)	Insurer	83	
AUSTRALIAN PENSIONERS (B)	All but NT	13 25 55	Either	✓	Either	Assessing firm (S)	Insurer	83	
RACT	Tas	13 27 22 in Tas, www.ract.com.au	Agreed	✓	Either	Policyholder	Insurer	82	
NRMA	ACT, NSW, Vic	13 21 32, www.nrma.com.au	Agreed	✓	(K)	Policyholder	Insurer (Q)	81	
CGU	All but NT	13 15 32	Either	✓	Policyholder (L)	Policyholder	Insurer	81	
FAI	All	13 10 00, www.fai.com.au	Either (G)	✓ (Not in Qld, Tas)	Either	Insurer (T)	Insurer (Q)	80 (SA, Tas, Vic) 78 (ACT, NSW, NT, Qld, WA)	
RACQ-GIO	Qld	13 19 05, www.racq-gio.com.au	Either		Policyholder	Policyholder	Insurer (Q)	80	
TII	All	(03) 9623 3355 or 1800 335 200	Market	✓	Policyholder	Policyholder	Repairer	79	
AAMI	All but WA	13 22 44, www.aami.com.au	Agreed		Either (M)	Insurer	Insurer	78 (SA, Tas) 77 (ACT, NSW) 75 (Qld, Vic)	
EIG-ANSVAR	All	1300 650 540, www.ansvar.com.au	Market	✓	Policyholder	Policyholder	Repairer	75 (NT, SA, Vic) 73 (Qld, Tas) 71 (ACT, NSW, WA)	
RAA-GIO	SA	(08) 8202 4567 or 1800 068 988 (country areas), www.raa.net	Either (G)	✓	Policyholder	Policyholder	Insurer (Q)	75	
COTA Mature Outlook (C)	All	1800 677 249	Either	✓ (Not in Qld, Tas)	Either	Either (Q)	Insurer	73 (SA, Tas, Vic) 71 (ACT, NSW, NT, Qld, WA)	
HBF	WA	13 20 65 in WA	Agreed	✓	(K)	Insurer	Insurer	73	
SUNCORP-METWAY	Qld (F)	13 11 55, www.suncorpmetway.com.au	Either	✓	Either	Insurer	Insurer	70	
SWANN	All	Contact state branches for referral to agent	Market, (agreed in NT, WA)		Policyholder	Either	Repairer	70 (Qld, WA) 68 (other states)	
MUTUAL COMMUNITY	SA	13 61 51	Either (H)	✓	Either	Policyholder	Insurer	68	
WESTERN QBE	All but NT	13 11 01 (13 13 03 in WA)	Either	✓	Policyholder (N)	Insurer	Repairer	68 (all but WA) 55 (WA)	
DIRECDIAL (D)	All but NT	13 19 29, www.mmi.com.au	Agreed (J)		Policyholder	Policyholder	Repairer	67	
HBA	Vic	13 61 51	Either (H)	✓	Either	Policyholder	Insurer	67	
GIO RoadCover	Vic	13 10 10, www.gio.com.au	Agreed	✓	Either	Either	Insurer	66	
SGIC	SA	13 32 33	Agreed	✓	Policyholder (L)	Policyholder (Q)	Insurer (Q)	66	
AMP Motor Vehicle Insurance	All	13 14 36, www.amp.com.au	Either	✓	Either	Policyholder	Insurer	62	
TIO	NT	(08) 8946 2222, www.tiofi.com.au	Market	✓	Normally insurer	Either	Insurer (Q)	61	
RACV (E)	Vic	13 19 55, www.racv.com.au	Either		(P)	Policyholder (U)	Insurer (U)	60	
RAC Motorguard	WA	13 17 04 in WA, www.rac.com.au	Agreed	✓	Policyholder (Q)	Policyholder (Q)	Insurer (Q)	54	
TGIO	Tas	13 10 10, www.gio.com.au	Market	✓	Policyholder	Policyholder	Insurer	52	
GIO	ACT, NSW	13 10 10, www.gio.com.au	Agreed	✓	Policyholder	Either	Insurer	47	
GIO	NT	13 10 10, www.gio.com.au	Agreed		Policyholder	Policyholder	Insurer	46	
SGIO	WA	13 32 33, www.sgio.com.au	Agreed	✓	(R)	Policyholder (Q)	Insurer (Q)	41	
GIO	WA	13 10 10, www.gio.com.au	Agreed	✓	Policyholder	Either	Insurer	40	
AMP Car Insurance Options	All	13 14 36, www.amp.com.au	Either	✓	Either	Policyholder	Insurer	37	
GIO RoadCover Basic	Vic	13 10 10, www.gio.com.au	Market		Either	Either	Insurer	28	

Getting help

If you have complicated insurance needs — for example, you also use your car for business — you can get help with choosing.

■ Insurance agents act for an insurance company and are paid by it. They can give you information about the range of products from that company.

■ Insurance brokers look at a range of policies from different insurance companies. You pay a broker to find the best insurance to suit your needs. The cost varies — some charge a flat fee while others work on commission. Before you use a broker, check that they're registered with the Australian Securities and Investments Commission (ASIC). Also ask which companies the broker represents and how they are paid.

The National Insurance Brokers Association (NIBA) can give you a list of brokers near you. If you're in Sydney, phone 1800 333 172; if you're in Melbourne, phone 1800 252 558. Other readers can use either number or check the website at www.niba.com.au.

Step 4: Getting your money's worth

As you can see from *What will it cost you?*, starting on page 24, there can be a large variation in quotes from insurers for the same circumstances. There's a lot that can affect what you pay for your insurance, including rating factors, your no-claim bonus and the excess you have to pay.

Rating factors

The more likely the risk, the higher the premium. What affects the premium for each company varies, but following are some of the general factors that are taken into consideration:

■ **Make and model:** This covers the value of your car, the usual cost of repairs to that model, its age and the type of car (for example, if it's a sports car or high-performance model). If it poses a higher risk of accident or theft or is more expensive to replace or repair, it will be more expensive to insure.

■ **Who you are:** This includes the age and driving history of all regular drivers. Your driving history includes any claims you may have made, previous accidents, driving charges and traffic fines.

■ **Location:** Cars are at greater risk of accident, theft or malicious damage in major cities. Most companies calculate the risk involved on a postcode basis, but not all treat each suburb or town the same, so it pays to shop around.

■ **The use of the car:** If your car is used for business purposes insurers will assume it travels further and/or more often, so it's therefore more exposed to risk. All the information in this article is based on private use.

■ **Where the car is parked:** Some companies offer lower premiums for more secure parking, but in most cases where the car is parked (on the street, in



a carport, etc) doesn't affect the premium.

■ **Finance:** Most insurers impose a higher premium if the car is being used as security for a loan. If you have a personal loan for it that's unsecured you'll probably get the normal premium.

■ **Discounts:** Having more than one policy with the insurer or attending drivers' education courses may reduce the premium you pay. These may be considered as rating factors or given as a percentage discount or premium rebate once the premium has been calculated.

No-claim bonuses

A no-claim bonus can make a big difference to the premium you pay. For the companies we looked at the maximum no-claim bonus was equivalent to a discount of 55% to 70%.

When you're looking for an insurer you should check how your no-claim bonus will be affected after a claim if you're at fault.

All the companies we looked at, except SUNCORP-METWAY and GIO in NT, offer some form of protected no-claim bonus. This means your no-claim bonus isn't affected even if you make an at-fault claim. Many of these companies only allow one protected at-fault claim per year.

Some insurers automatically protect the bonus when you reach the maximum level; with others you have to keep a maximum no-claim bonus for three years or longer or pay an extra amount.

If you make a claim and don't have a protected no-claim bonus AAMI, AUSTRALIAN ALLIANCE, AUSTRALIAN PENSIONERS, COTA, FAI, RACQ-GIO and SUNCORP-METWAY reduce it by one level, SGIO by three levels and with HBF it depends on your current no-claim bonus. With all the other companies you'll lose two levels' worth of your no-claim bonus, though with WESTERN QBE it's only one if the claim is for less than \$1000.

If you want to change insurers and you can prove what your last no-claim bonus was, all the companies we looked at will give you the same rating.

Can your insurer walk away?

Of the disputed car insurance claims that appeared before the General Insurance Claims Review Panel in 1998, 16% were because the insurance company claimed the consumer wasn't really insured because they hadn't told the insurer what it needed to know.

An insurance company can deny your cover if it discovers you didn't answer its questions properly when you bought or renewed the policy. If the company insured you based on the incorrect information but wouldn't have insured you had it known the correct answers, your claim won't be paid and your insurance could be cancelled.

To avoid this you need to be thorough. Make sure all the answers you give are correct, and if you don't know for sure, don't guess.

Go through this process when you renew your insurance each year. If you pay quarterly or monthly, get an annual review of the details the insurance company has. You must also inform your insurer if there's any change to your address, how you use the car, who drives the car, your driving record (including any accidents you haven't made a claim for) or if you make modifications to the car.

Excesses

The excess is a fixed dollar amount that you'll pay if you make a claim on your insurance policy. As shown in the *Policy features* table (page 21), most companies have excess options that allow you to remove the excess altogether for a higher premium or increase the excess to reduce the premium.

If you're interested in increasing your excess to reduce your premium costs, don't choose an excess that's too high, or it will hardly ever make sense to make a claim.

Some companies also apply other excesses when you make a claim, such as for undeclared or inexperienced drivers, driver age, high-powered vehicles or bad driving records. If you think any of these could apply to you, check before you buy your insurance, otherwise you could end up paying more for a claim than you'd expected.

Step 5: Buying your insurance

Most of the policies we looked at are available over the phone or at branches. If you're buying your insurance directly, rather than through an insurance agent or broker (see *Getting Help*, far left), make

sure you find out what's covered, and think very carefully when answering any questions (see *Can your insurer walk away?*, below left).

AAMI, EIG-ANSVAR, FAI, NRMA, RAC, RAA and RACQ have Internet sites where you can ask for quotes. If you get a quote or buy your insurance over the Internet, check that it's a secure site before you send personal or financial information. The other companies with websites listed in the *Policy features* table provide some product information but not quotes. CHOICE Online (www.choice.com.au) has more information on buying your insurance over the Internet.

Step 6: Making a claim

This is the step we hope you never need, but more car insurance claims end up before the General Insurance Claims Review Panel than any other type of insurance, so it helps to be prepared.

Think carefully before you make a claim and compare the cost of repairs to the cost of your excess and no-claim bonus. For example, if you have a \$600 bingle and your excess is \$400, the impact on your no-claim bonus could be more than \$200, meaning there's no financial incentive to claim. However, even if you decide not to make a claim you must let the insurer know what happened.

What you think

In November last year, almost 4100 CHOICE subscribers responded to our car insurance survey.

On the whole, subscribers were quite satisfied with the time taken to approve their claim and the helpfulness of staff. Overall satisfaction with claims handling remains high.

Of the total respondents, 36% had made a claim in the last three years: 37% of people in cities, 32% of people in regional areas.

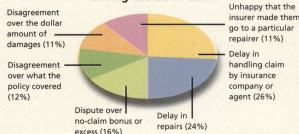
Of concern is that 24% of respondents who made a claim had a problem with it, including delays in handling or repairs; disputes over the no-claim bonus; disagreements over what was covered; the dollar amount of damages; and the repairer they had to use.

Claims handling

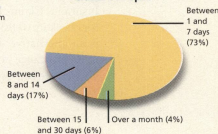
Company (in order of overall satisfaction, number of responses in brackets)	Had a problem with claim (%)	Time to approve (% very satisfied)	Helpfulness of staff (% very satisfied)	Overall satisfaction with claims handling (% very satisfied)
FAI (76)	23	73	75	73
RACQ (52)	23	77	66	73
NRMA (388)	23	74	66	69
SUNCORP (79)	25	71	63	68
AAMI (197)	24	72	74	67
GIO (89)	22	66	60	67
RACV (113)	28	63	65	61
Average	24	71	67	68

These were the only companies for which we received enough responses to give information. The percentage of people who had a problem with their claim looks, from this information, fairly standard across the industry at around a quarter.

Type of problems experienced during course of claim



Length of time taken to approve claim or repair



If you have an accident

You'll need to let the insurance company know immediately. You might also be required to contact the police.

While you're at the scene, record:

- Make, model, registration number and insurance company for each car involved.
- Name, address and licence number of each driver.
- Name, address and details of anyone injured.
- Name and address of any witnesses.
- Details of any other property damaged.

All but one of the insurers we looked at leave you're not at fault, provided you can identify the person responsible. The only exception was GIO RoadCover Basic in Victoria if you don't have a protected no-claim bonus. With AMP the company must recover the costs from the person responsible.

The excess is also waived by all companies if you're not at fault, but AMP, GIO RoadCover Basic, SGIO and WESTERN QBE (in WA) only do this once they have recovered the cost.

If you need repairs

In our survey, 27% of respondents said a claim or repair took more than a week to approve, while 73% were approved in under a week.

Different insurance companies treat repairs in different ways; the *Policy features* table on page 21 gives details, and the policy may also state who organises repairs. The most attractive process will depend on your circumstances. If you're confident in your ability to choose a repairer, or you already know a good one, you may want to make these decisions yourself; other people may be very happy for the insurer to choose.

Regardless of how you want to have repairs organised, check if the company will help you if there's a problem. If you choose an approved repairer the company may guarantee the repairs.

An unsatisfactory outcome?

If you're not happy with the outcome of a claim, the first step is to complain to the insurance company. If it can't be resolved, contact the General Insurance Claims Review Panel on 1300 363 683 (or check its website at www.iecltd.com.au). This is an alternative dispute resolution scheme that most insurance companies are members of and it's free for consumers.

What will it cost you?

How to use the price information

- Choose the scenario on the next few pages that best matches your circumstances and then look at your state. For all but our younger drivers we give price information with and without recent previous claims. All but the younger drivers and drivers with claims are on the maximum no-claim bonus.
- Our scenarios are based on the market value for the car models given in Glass's guide. The car has all the standard features.
- High-cost areas are in major cities, where the risks (and therefore premiums) are higher.
- The range of costs we were quoted and the average of them give you an idea of the types of quotes you can expect.
- Keep in mind that GST will apply from July 1, 2000. How insurers include this in the premium, if the policy extends beyond this date, varies.
- We've analysed the prices and policies to come up with companies worth calling for a quote for each scenario in each state. We suggest you contact these companies as they offer a good policy (represented by a high policy score in the *Policy features* table) at a low price.

But ... what about me?

- If you can't find a scenario that suits you exactly, one of them may still give you a good indication.
- If you're single, any of the couple scenarios (pages 26, 28 and 29) will work for you.
- If you're under 25, use the male or female younger driver scenario. In most cases the closer you are to 25, the less you'll pay.
- If you have a son or daughter who drives your car and is younger than 25 you'll probably still pay a higher premium. For most companies it makes little difference whether the younger driver is male or female.
- If you have an car older than those shown in our scenarios, it's likely the market or agreed value will be less and so the premium should be lower.

Cover for young drivers

As you can see from our scenarios on the right, the cost of comprehensive car insurance for a younger driver (under 25) is higher. This is because younger people in general make more claims. They also generally have to pay a higher excess.

If you're a younger driver it's worth asking if you can carry over any no-claims experience you've earned by being listed on your parent's policy.

If you have a younger driver who uses your car, think carefully about how often they use it. You may be able to reduce the impact on your premium if they fit the insurer's definition of an 'occasional' or 'casual' driver.

Male younger driver

Our male younger driver is 20 and this is his first car. He drives a 1996 Ford Festiva GLi.

ACT	High-cost area	Low-cost area
Range (\$)	945-2374	945-2374
Average (\$)	1591	1582
Companies to call	AAMI, FAI, NRMA	AAMI, FAI, NRMA
Northern Territory		
Range (\$)	860-1590	860-1532
Average (\$)	1299	1268
Companies to call	FAI	FAI
NSW		
Range (\$)	1872-5974	743-1950
Average (\$)	3193	1435
Companies to call	AAMI, FAI, NRMA	AAMI, FAI, NRMA
Queensland		
Range (\$)	758-2009	603-1431
Average (\$)	1278	1012
Companies to call	AAMI, NRMA, RACQ-GIO	FAI, NRMA, RACQ-GIO
South Australia		
Range (\$)	1302-2552	1012-1955
Average (\$)	1825	1437
Companies to call	FAI	CGU, EIG-ANSVAR, FAI
Tasmania		
Range (\$)	755-1523	755-1523
Average (\$)	1153	1140
Companies to call	EIG-ANSVAR, FAI, RACT	EIG-ANSVAR, FAI, RACT



Victoria	High-cost area	Low-cost area
Range (\$)	1219-3691	537-1668
Average (\$)	2067	1146
Companies to call	EIG-ANSVAR, NRMA	EIG-ANSVAR, FAI, NRMA
Western Australia		
Range (\$)	926-2366	873-1854
Average (\$)	1496	1356
Companies to call	CGU, FAI	FAI

Female younger driver

Our younger female driver is also 20 and driving her first car. She drives a 1996 Ford Festiva GLi.

ACT	High-cost area	Low-cost area
Range (\$)	925-2126	945-2126
Average (\$)	1544	1514
Companies to call	FAI, NRMA	FAI, NRMA
Northern Territory		
Range (\$)	721-1590	721-1532
Average (\$)	1247	1216
Companies to call	FAI	FAI



NSW	High-cost area	Low-cost area
Range (\$)	1791-5235	743-1950
Average (\$)	3151	1383
Companies to call	AAMI, FAI, NRMA	AAMI, FAI, NRMA
Queensland		
Range (\$)	758-1820	603-1431
Average (\$)	1235	976
Companies to call	AAMI, FAI, NRMA, RACQ-GIO	FAI, NRMA, RACQ-GIO
South Australia		
Range (\$)	1253-2451	974-1616
Average (\$)	1751	1376
Companies to call	FAI	FAI
Tasmania		
Range (\$)	647-1523	647-1523
Average (\$)	1144	1119
Companies to call	FAI	FAI
Victoria		
Range (\$)	950-3248	414-1540
Average (\$)	1972	1089
Companies to call	AAMI, EIG-ANSVAR, FAI, NRMA	FAI, NRMA
Western Australia		
Range (\$)	822-2087	775-1854
Average (\$)	1460	1321
Companies to call	FAI	FAI

CAR INSURANCE

Couple, no claims

This couple doesn't have any younger drivers listed on the policy. They drive a 1997 Nissan Pulsar and haven't made a claim. The quote would be the same for a **single person** in this situation. We also got quotes for the same scenario with a recent at-fault claim (see below).

ACT	High-cost area	Low-cost area
Range (\$)	354-650	354-650
Average (\$)	474	469
Companies to call	AAMI, FAI, NRMA	AAMI, AUSTRALIAN ALLIANCE, FAI, NRMA
Northern Territory		
Range (\$)	301-463	301-460
Average (\$)	407	399
Companies to call	EIG-ANSVAR, FAI	EIG-ANSVAR, FAI
NSW		
Range (\$)	578-1345	346-640
Average (\$)	958	431
Companies to call	AAMI, FAI	FAI, NRMA
Queensland		
Range (\$)	243-499	199-414
Average (\$)	390	312
Companies to call	NRMA, RACQ-GIO	FAI, NRMA, RACQ-GIO
South Australia		
Range (\$)	342-636	251-478
Average (\$)	485	370
Companies to call	AUSTRALIAN ALLIANCE, FAI	AUSTRALIAN ALLIANCE, FAI, RAA-GIO
Tasmania		
Range (\$)	246-443	246-443
Average (\$)	339	332
Companies to call	AUSTRALIAN ALLIANCE, FAI, RACT	AUSTRALIAN ALLIANCE, FAI, RACT



Victoria	High-cost area	Low-cost area
Range (\$)	458-826	233-427
Average (\$)	616	345
Companies to call	AAMI, EIG-ANSVAR	AAMI, FAI, NRMA
Western Australia		
Range (\$)	334-540	323-540
Average (\$)	427	398
Companies to call	AUSTRALIAN ALLIANCE, FAI	AUSTRALIAN ALLIANCE, FAI

Couple with a previous claim

ACT	High-cost area	Low-cost area
Range (\$)	354-797	354-797
Average (\$)	594	589
Companies to call	AUSTRALIAN ALLIANCE	AUSTRALIAN ALLIANCE
Northern Territory		
Range (\$)	301-697	301-684
Average (\$)	556	544
Companies to call	EIG-ANSVAR, FAI	EIG-ANSVAR, FAI
NSW		
Range (\$)	578-1871	329-647
Average (\$)	1227	539
Companies to call	AAMI, AUSTRALIAN ALLIANCE	AAMI, AUSTRALIAN ALLIANCE, CGU, FAI, NRMA
Queensland		
Range (\$)	335-740	284-575
Average (\$)	492	391
Companies to call	AUSTRALIAN ALLIANCE, RACQ-GIO	AUSTRALIAN ALLIANCE, RACQ-GIO

South Australia	High-cost area	Low-cost area
Range (\$)	419-867	328-650
Average (\$)	595	447
Companies to call	AUSTRALIAN ALLIANCE	AUSTRALIAN ALLIANCE, CGU, RAA-GIO
Tasmania		
Range (\$)	297-665	297-665
Average (\$)	414	406
Companies to call	AUSTRALIAN ALLIANCE, CGU, FAI, RACT	AUSTRALIAN ALLIANCE, RACT
Victoria		
Range (\$)	458-1240	301-606
Average (\$)	810	435
Companies to call	EIG-ANSVAR	AAMI, AUSTRALIAN ALLIANCE, CGU, EIG-ANSVAR, FAI
Western Australia		
Range (\$)	380-806	323-634
Average (\$)	546	505
Companies to call	AUSTRALIAN ALLIANCE, CGU, FAI	AUSTRALIAN ALLIANCE, FAI

Family car, no claims

This car is driven equally by a husband, wife and their 19-year-old daughter. They drive a 1998 Holden Commodore VT Executive, 3.8 litre sedan and haven't made a claim. We also got quotes for the same scenario with a recent at-fault claim caused by one of the parents (see below).

ACT	High-cost area	Low-cost area
Range (\$)	318-2764	318-2764
Average (\$)	935	922
Companies to call	AAMI, FAI	AAMI, FAI
Northern Territory		
Range (\$)	460-1909	460-1909
Average (\$)	814	801
Companies to call	EIG-ANSVAR, FAI	EIG-ANSVAR, FAI
NSW		
Range (\$)	692-3645	448-1879
Average (\$)	1865	869
Companies to call	AAMI, FAI, NRMA	AAMI, FAI, NRMA
Queensland		
Range (\$)	314-2093	253-1719
Average (\$)	745	591
Companies to call	AAMI, NRMA, RACQ-GIO	AAMI, NRMA, RACQ-GIO
South Australia		
Range (\$)	448-2213	325-1839
Average (\$)	883	687
Companies to call	AAMI, RAA-GIO	AAMI, EIG-ANSVAR, RAA-GIO
Tasmania		
Range (\$)	347-1808	331-1808
Average (\$)	698	683
Companies to call	AAMI, FAI	AAMI, FAI



Victoria	High-cost area	Low-cost area
Range (\$)	483-3879	313-2145
Average (\$)	1201	672
Companies to call	AAMI, EIG-ANSVAR	AAMI, EIG-ANSVAR
Western Australia		
Range (\$)	527-2079	458-2079
Average (\$)	867	798
Companies to call	FAI	FAI

Family car with a previous claim

ACT	High-cost area	Low-cost area
Range (\$)	395-3592	395-3592
Average (\$)	1186	1174
Companies to call	AAMI, FAI	AAMI, FAI
Northern Territory		
Range (\$)	460-2480	460-2480
Average (\$)	1073	1053
Companies to call	EIG-ANSVAR, FAI	EIG-ANSVAR, FAI
NSW		
Range (\$)	665-4739	560-2443
Average (\$)	2380	1086
Companies to call	AAMI, FAI	AAMI, FAI
Queensland		
Range (\$)	389-2721	312-2235
Average (\$)	925	734
Companies to call	RACQ-GIO	RACQ-GIO

South Australia	High-cost area	Low-cost area
Range (\$)	458-2877	347-2391
Average (\$)	1076	827
Companies to call	EIG-ANSVAR, RAA-GIO	AAMI, EIG-ANSVAR, RAA-GIO
Tasmania		
Range (\$)	368-2351	368-2351
Average (\$)	853	838
Companies to call	AAMI, FAI	AAMI, FAI
Victoria		
Range (\$)	483-5042	342-2788
Average (\$)	1551	840
Companies to call	EIG-ANSVAR	EIG-ANSVAR
Western Australia		
Range (\$)	540-2702	540-2702
Average (\$)	1097	1000
Companies to call	FAI	FAI

CAR INSURANCE

Older car, no claims

A couple in their mid thirties drive a 1991 1.5 litre Mazda 323 Astina five-door hatchback and haven't made a claim. The quote would be the same for a **single person** in the same situation. We also got quotes for the same scenario with a recent at-fault claim (see below).

ACT	High-cost area	Low-cost area
Range (\$)	283-573	283-573
Average (\$)	456	450
Companies to call	AAMI, AUSTRALIAN ALLIANCE, FAI, NRMA	AAMI, FAI
Northern Territory		
Range (\$)	241-504	241-448
Average (\$)	373	365
Companies to call	EIG-ANSVAR, FAI	EIG-ANSVAR, FAI
NSW		
Range (\$)	462-1171	334-534
Average (\$)	926	409
Companies to call	AAMI, FAI	AAMI, FAI, NRMA
Queensland		
Range (\$)	268-534	228-398
Average (\$)	392	310
Companies to call	AAMI, FAI, RACQ-GIO	FAI, RACQ-GIO
South Australia		
Range (\$)	337-573	265-471
Average (\$)	453	346
Companies to call	EIG-ANSVAR, FAI	AUSTRALIAN ALLIANCE, EIG-ANSVAR, FAI, RAA-GIO
Tasmania		
Range (\$)	238-480	238-480
Average (\$)	313	306
Companies to call	AAMI, FAI, RACT	AAMI, FAI, RACT



Victoria	High-cost area	Low-cost area
Range (\$)	366-826	262-540
Average (\$)	628	349
Companies to call	AAMI, EIG-ANSVAR	AAMI, EIG-ANSVAR, FAI
Western Australia		
Range (\$)	304-503	259-496
Average (\$)	396	368
Companies to call	FAI	FAI

Older car with a previous claim

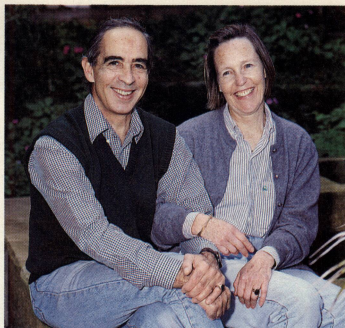
ACT	High-cost area	Low-cost area
Range (\$)	283-860	283-860
Average (\$)	564	559
Companies to call	AUSTRALIAN ALLIANCE	AUSTRALIAN ALLIANCE
Northern Territory		
Range (\$)	241-754	241-670
Average (\$)	514	501
Companies to call	EIG-ANSVAR	EIG-ANSVAR
NSW		
Range (\$)	462-1690	339-670
Average (\$)	1192	505
Companies to call	AAMI, AUSTRALIAN ALLIANCE	AAMI, AUSTRALIAN ALLIANCE
Queensland		
Range (\$)	268-801	228-596
Average (\$)	493	385
Companies to call	AAMI, AUSTRALIAN ALLIANCE, RACQ-GIO	AAMI, AUSTRALIAN ALLIANCE, CGU, FAI, RACQ-GIO

South Australia	High-cost area	Low-cost area
Range (\$)	337-856	287-703
Average (\$)	545	413
Companies to call	AUSTRALIAN ALLIANCE, EIG-ANSVAR, RAA-GIO	AUSTRALIAN ALLIANCE, EIG-ANSVAR, RAA-GIO
Tasmania		
Range (\$)	238-720	238-720
Average (\$)	378	370
Companies to call	AAMI, AUSTRALIAN ALLIANCE, FAI, RACT	AAMI, AUSTRALIAN ALLIANCE, FAI, RACT
Victoria		
Range (\$)	366-1287	306-649
Average (\$)	815	437
Companies to call	EIG-ANSVAR	AAMI, EIG-ANSVAR
Western Australia		
Range (\$)	304-755	259-649
Average (\$)	500	461
Companies to call	AUSTRALIAN ALLIANCE	AUSTRALIAN ALLIANCE, FAI

Age discount, no claims

At 55 and 60 this couple may qualify for a discount on their car insurance. They drive a 1996 1.6 litre Toyota Corolla CSI five-door hatchback and haven't made a claim. The quote for a **single person** would be similar. We also got quotes for the same scenario with a recent at-fault claim (see below).

ACT	High-cost area	Low-cost area
Range (\$)	332-511	329-511
Average (\$)	416	413
Companies to call	AAMI, AUSTRALIAN PENSIONERS, FAI	AAMI, AUSTRALIAN PENSIONERS, FAI
Northern Territory		
Range (\$)	277-455	277-455
Average (\$)	362	356
Companies to call	FAI	FAI
NSW		
Range (\$)	578-1185	301-491
Average (\$)	833	375
Companies to call	AAMI, AUSTRALIAN PENSIONERS, FAI	FAI, NRMA
Queensland		
Range (\$)	266-435	217-347
Average (\$)	352	278
Companies to call	NRMA, RACQ-GIO	AUSTRALIAN PENSIONERS, FAI, NRMA, RACQ-GIO
South Australia		
Range (\$)	336-550	231-424
Average (\$)	418	323
Companies to call	AUSTRALIAN PENSIONERS, FAI, RAA-GIO	AUSTRALIAN PENSIONERS, FAI, RAA-GIO
Tasmania		
Range (\$)	224-363	224-363
Average (\$)	299	293
Companies to call	AUSTRALIAN PENSIONERS, FAI	AUSTRALIAN PENSIONERS, FAI



Victoria	High-cost area	Low-cost area
Range (\$)	447-786	209-436
Average (\$)	555	310
Companies to call	AAMI, AUSTRALIAN PENSIONERS, CGU, EIG-ANSVAR, FAI	FAI, NRMA
Western Australia		
Range (\$)	323-512	288-445
Average (\$)	390	361
Companies to call	AUSTRALIAN PENSIONERS, FAI	FAI

Age discount with a previous claim

ACT	High-cost area	Low-cost area
Range (\$)	354-758	329-758
Average (\$)	526	520
Companies to call	AUSTRALIAN PENSIONERS	AUSTRALIAN PENSIONERS
Northern Territory		
Range (\$)	301-670	301-670
Average (\$)	492	482
Companies to call	FAI	FAI
NSW		
Range (\$)	578-1778	301-614
Average (\$)	1058	466
Companies to call	AUSTRALIAN PENSIONERS	AUSTRALIAN PENSIONERS
Queensland		
Range (\$)	335-652	252-488
Average (\$)	437	347
Companies to call	AUSTRALIAN PENSIONERS, RACQ-GIO	AUSTRALIAN PENSIONERS

South Australia	High-cost area	Low-cost area
Range (\$)	359-826	271-545
Average (\$)	510	387
Companies to call	AUSTRALIAN PENSIONERS, RAA-GIO	AUSTRALIAN PENSIONERS, RAA-GIO
Tasmania		
Range (\$)	269-545	269-545
Average (\$)	364	357
Companies to call	AUSTRALIAN PENSIONERS, FAI	AUSTRALIAN PENSIONERS, FAI
Victoria		
Range (\$)	447-1179	276-578
Average (\$)	727	390
Companies to call	AUSTRALIAN PENSIONERS, CGU, EIG-ANSVAR	AUSTRALIAN PENSIONERS, CGU, EIG-ANSVAR, FAI
Western Australia		
Range (\$)	371-768	310-658
Average (\$)	497	457
Companies to call	AUSTRALIAN PENSIONERS	AUSTRALIAN PENSIONERS, FAI

Do you think artificial sweeteners will help you lose weight? Or do you just prefer the taste? Most importantly, are they safe? There are few clear-cut answers.



Artificial sweeteners

IN BRIEF

■ In most cases there's no definitive proof that a sweetener is safe, and regulators have to base their approval for its use on the balance of the scientific evidence. Critics sometimes accuse the food industry of having too much sway in these decisions.

■ Some people could exceed the acceptable daily intake (ADI — see right) of some sweeteners — but as most labels don't tell you how much a product contains, it would be hard to know if you were at risk of this.

■ There's no evidence that artificial sweeteners will help you lose weight.

THE MOST RECENT SNAPSHOT OF our artificial sweetener habits comes from an Australia New Zealand Food Authority (ANZFA) survey in 1995. It found that one in two people consume products containing artificial sweeteners in any one week. The most popular product is 'diet' soft drinks — nearly one in three people drink these — followed by artificially sweetened chewing gum and yoghurt.

While the market for tabletop sweeteners (the ones you add to tea and coffee or sprinkle on desserts) has recently taken a dive, the number of sugar-free sweets, chewing gum, soft drinks and dairy foods containing artificial sweeteners has increased. Consumption of artificially sweetened gum and cordial is highest among 12–17-year-olds.

Surprisingly, only 28% of people deliberately eat artificially sweetened foods for health or weight reasons. The 1995 survey found it wasn't a conscious choice for 40% of people who ate them.

A substantial number of people — 22% — buy artificially sweetened foods for the taste. There are more sweeteners available than ever before and manufacturers are increasingly using mixtures of these chemicals to get the optimum flavour. Some sweeteners — like aspartame — are used in chewing gum because they intensify and extend flavours, making the sweetener last for up to four times longer than sugar does.

Are they safe?

For most artificial sweeteners, food regulators have set an acceptable daily intake (ADI), which expresses the amount they consider you could safely consume, per kilogram of your bodyweight, every day over a lifetime. The ADI is based on tests examining the maximum amount of the sweetener that can be added to an animal's diet without causing any adverse effects, divided by a 'safety factor' (usually 100).

Critics say it isn't possible to relate the effect of an additive on an animal to that on a human, and so using 100 as a safety factor is guesswork. For example, some people may be more sensitive than others and may be more likely to suffer adverse effects from chemicals in their food. Supporters say animal studies have long been used in this kind of work and are generally accepted as appropriate.

Another issue is that some ADIs are based on tests done many years ago. While these tests may still be valid, it would make sense for regulators to look out for new evidence.

ANZFA says exceeding the ADI is only considered unsafe if it occurs over a long period of time. As part of a wider review of food standards, it's considering restricting the use of some sweeteners whose ADI it believes some people may consistently exceed.

Diabetes Australia advises people with diabetes to use a variety of sweeteners to reduce the likeli-

hood of consuming too much of any particular one (see page 33 for more on sweeteners and diabetes).

Troublesome mixture?

There's a trend in the food industry to mix sweeteners in products. Acesulphame-K, for example, boosts the sweetness of cyclamate, aspartame and alitame, so smaller amounts of sweetener are needed. Such mixtures can also improve overall flavour.

Unfortunately, mixing some chemicals has been suspected of increasing their overall toxicity. In 1985, for example, the US National Academy of Sciences concluded that while cyclamates were not carcinogenic on their own, cyclamate-saccharin mixtures may be linked to a small increase in the risk of bladder cancer in certain groups of people. But regulatory authorities, including ANZFA, don't generally require the toxicity testing of combinations of sweeteners before approval.

Sweetener profiles

Unlike 'nutritive' sweeteners (for example sugar, lactose and reduced-energy sweeteners like sorbitol and isomalt), artificial sweeteners are intensely sweet and don't provide any energy in the very small amounts they're used. They're sometimes called 'non-nutritive' or 'intense' sweeteners. Artificial sweeteners allowed in Australia are aspartame, cyclamate, saccharin, acesulphame-K, sucralose, alitame and thaumatin.

Aspartame

■ **Additive code number:** 951.

■ **Derived from amino acids,** aspartame was discovered by accident in 1965. It was approved in Australia in 1983. It's used in over 5000 foods, personal care products and pharmaceuticals worldwide, and has replaced many older sweeteners. While technically it has a nutritive value, because such small amounts are used it is, in effect, a non-nutritive sweetener.

■ **Brand names for tabletop sweeteners:** Equal (tablets, powder, sachets); NutraSweet (tablets, powder); No Frills (tablets); Sugarless (tablets, sachets); Weight Watchers with NutraSweet (tablets). A mix of aspartame and acesulphame-K: Hermeset Gold (tablets, granules); Balance (tablets).

■ **Sweetness:** 180 times sweeter than sugar. Its taste is much more like sugar than the older sweeteners. It's often mixed with acesulphame-K, which further boosts its sweetness.

■ **Main sources:** Other than tabletop sweeteners, soft drinks and yoghurt.

■ **How much is OK?** The Australian ADI is 0-40 mg per kg of bodyweight — so, for example, if you weigh 70 kg you shouldn't have more than

2800 mg a day. The trouble is, it's very hard to know how much you're consuming: a can of Diet Coke, for example, tells you it contains 'sweetener 951' but not how much of it.

ANZFA says it's unlikely anyone would reach the ADI for aspartame. However, according to the American Dietetic Association, it would take an 18 kg child (around five years old) "four 12 oz cans of diet soda" (equivalent to 1.4 litres) to get to the US ADI of 50 mg/kg. This is a hypothetical situation, based on the drink containing the maximum permitted amount of aspartame in the US. However, given that the Australian ADI is lower than this, we queried ANZFA's claim — especially considering that children are more likely to have more soft drinks on a hot day. However, ANZFA believes there's no cause for concern unless the ADI is consistently exceeded.

■ Safety concerns

There's been debate for nearly 20 years over the safety of aspartame, but currently most available evidence suggests it's safe.

— People with certain conditions, such as phenylketonuria (PKU), can't metabolise phenylalanine, the naturally occurring amino acid in aspartame. This is noted on the label of any product that contains aspartame.

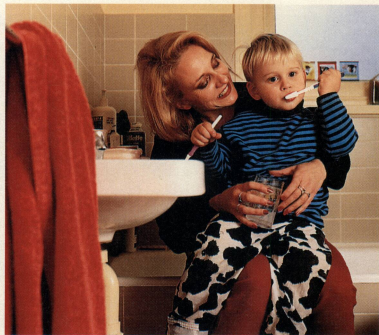
'Sugar-free'? So what?

While some sweeteners are used simply to improve the flavour of an otherwise unpalatable product — for example, electrolyte drinks — most artificially sweetened foods are marketed with a heavy emphasis on weight loss: 'diet', 'carbohydrate-modified', 'low' or 'reduced' calorie, joule or energy, and 'lite'. 'No added sugar', 'reduced sugar' and 'sugar-free' are other terms used.

Given the lack of evidence that artificial sweeteners do aid weight loss (see page 34), these labels seem more relevant from a marketing viewpoint than a nutritional one.

Did you know?

Artificial sweeteners are used in some pharmacy products, such as children's syrups, chewable vitamins and toothpastes. Although the amounts involved may be small, children often swallow more toothpaste than they should, so keep an eye on them.



ARTIFICIAL SWEETENERS

Don't believe everything you read

There's been some scaremongering stuff on the Internet recently linking aspartame with multiple sclerosis (and just about every other disease that can't be explained).

No credible evidence is given for these claims and no reputable biological, medical or statistical source backs them up.

— Brain cancer? In 1996, the possibility was raised that aspartame consumption could be linked to brain cancer. This was based on a particular interpretation of earlier animal studies and cancer trends that was said to justify further research into the sweetener's carcinogenic potential. However, other scientists disagreed with this interpretation.

ANZFA reviewed the scientific evidence for a connection between aspartame and brain cancer and concluded that it didn't support the view that aspartame was carcinogenic in either humans or animals. The US Food and Drug Administration (FDA) and regulators in other countries, including Canada, the UK and Sweden, came to the same conclusion. Despite all this, there have been recurrent criticisms of the initial manufacturer-sponsored animal studies on aspartame and requests for them to be repeated by independent laboratories. There is currently one independent study under way in Italy.

— Adverse reactions? Aspartame has been linked anecdotally to a range of mild adverse reactions, such as headaches, dizziness, breathing difficulties and nausea. However, there's no scientific evidence that these problems were due to aspartame. If you think it affects you, stop having food or drinks that contain it — it'll be on the label.

Cyclamate

- Additive code number: 952.
- Cyclamate is cyclohexylsulfamic acid or its sodium or calcium salts. It was approved in Australia in 1965.
- Brand names for tabletop sweeteners: Cyclamate with saccharin: Sucaryl (liquid and tablets).

■ Sweetness: Sodium and calcium cyclamate are 30 times sweeter than sugar, and are often mixed with saccharin, especially in cordials and soft drinks (see *Troublesome mixture?*, page 31).

■ Main sources: Soft drinks, soups and cordial.

■ How much is OK? The ADI is 0–11 mg/kg bodyweight. Some people could exceed this, with artificially sweetened cordial being the most likely source, according to the ANZFA survey mentioned earlier. ANZFA has proposed lowering permitted levels of cyclamate in all non-alcoholic drinks and no longer allowing its use in tabletop sweeteners. This should reduce the amount of cyclamate you're likely to consume. If you're concerned, read labels and cut down on the products it's in.

Safety concerns

Animal studies in the late '60s suggested cyclamate was carcinogenic, and the US banned it in 1969. Studies on rats also linked cyclamate with atrophy of the testicles, and the UK followed with a ban in 1970. In 1995 it lifted this ban (to harmonise standards with the EU) on the basis of two manufacturer-endorsed studies that showed monkeys suffered less severe testicular atrophy than rats.

In this country, ANZFA acknowledges some unresolved questions but doesn't consider cyclamate or its breakdown products to be carcinogenic. It says it will monitor the EU Scientific Committee for Food's review of the ADI for cyclamate.

Saccharin

- Additive code number: 954.
- Saccharin is a petroleum by-product that's been around since before 1939. It can have a metallic or

bitter aftertaste, and now has strong competition from aspartame, although it's still the largest-volume non-nutritive sweetener used in the world.

■ Brand names for tabletop sweeteners: Sugarella (tablets), Hermesetas Original (tablets), Sugarine (tablets, liquid), Sugarless (liquid). Saccharin and cyclamate: Sucaryl (tablets, liquid).

■ Sweetness: 300 times sweeter than sugar.

■ Main sources: Other than tabletop sweeteners, cordial.

■ How much is OK? The ADI is 0–5 mg/kg bodyweight. You might exceed this if you use lots of saccharin tabletop sweeteners but, again, it could be hard to know when you'd reached the limit. While Sugarella tablets, for

Some of the products whose labels you'll want to check if you want to avoid a particular sweetener. Generally they'll tell you if it's present, but not how much of it.





Artificial sweeteners don't taste like sugar — it's worth trying a few to see which you prefer if you plan to use them long-term.

example, indicate the amount of saccharin in each tablet, Sugarine lists it as the amount of sodium saccharin (which is different) and Hermesetas Original tablets don't list it at all. So you've no way of knowing how much is too much.

■ Safety concerns

Despite its being one of the most highly studied of all food additives, there are no definitive conclusions about saccharin's safety. Some studies have shown it promotes bladder cancer in rats, while others have said this isn't relevant to humans. One human study has indicated links between saccharin and bladder cancer, yet studies using consumption data from over 50 years of use haven't found any evidence that it's a human carcinogen. Safety testing continues to be carried out in the US, and ANZFA doesn't propose to lower or remove the restrictions on its use here. As with cyclamate, the best advice is to cut down on the amount you consume if you're concerned.

Acesulphame-K

■ **Additive code number:** 950.

■ **Otherwise known as** Ace-K, or '6-methyl-1,2,3-oxathiazine-4 (3H)-1,2,2,2 dioxide cyclised in the presence of potassium hydroxide'. It was approved in Australia in 1984.

■ **Brand names for tabletop sweeteners:** Also known as Sunette, acesulphame-K is used with aspartame in tabletop sweeteners under the brands Hermesetas Gold (tablets, granules) and Balance (tablets).

■ **Sweetness:** 200 times sweeter than sugar but can have a bitter aftertaste. When combined with other sweeteners, the taste improves. The trend is towards

blending acesulphame-K with aspartame (for example in Diet Coke).

■ **Sources:** Although permitted in nearly all food categories, it's currently used only in a narrow range of products in Australia, and usually in combination. It's found in small amounts in some 'guilt-free' sugar-free confectionery to boost the sweetness of nutritive sweeteners like isomalt.

■ **How much is OK?** The ADI is 0–15 mg/kg bodyweight. You're unlikely to exceed this, given the limited number of products it's currently used in.

■ Safety concerns

There were pre-approval concerns regarding acesulphame-K and tumours of the lung and mammary glands in rats, and effects on cholesterol levels in diabetic rats. However, the US FDA concluded that the evidence didn't support such an association, and has approved it for a variety of uses, including in non-alcoholic drinks.

Some consumer groups have been calling for a safety reassessment because they claim the original safety tests, conducted in the 1970s, were poor-quality.

Sucralose

■ **Additive code number:** 955.

■ **Approved in 1993,** it's made from a chlorinated sugar that isn't recognised by digestive enzymes and so passes undigested through the body.

■ **Brand names for tabletop sweeteners:** Splenda (tablets, granules).

■ **Sweetness:** 600 times sweeter than sugar.

■ **Main sources:** Other than tabletop sweeteners, it's in relatively few products other than jam. Nevertheless, it's used in home cooking as a sugar substitute

If you have diabetes...

People with diabetes no longer have to avoid sugar at all costs (see CHOICE, September 1998), and so their requirement for artificial sweeteners is no longer as high. However, if you have diabetes, you still need to eat less sugar than most Australians consume. If you choose artificially sweetened foods, use a variety of sweeteners and keep an eye on your total consumption levels.

ARTIFICIAL SWEETENERS

On the available evidence, you'd have to drink more than a dozen cups of artificially sweetened tea or coffee a day before you even came close to exceeding any of the sweeteners' ADIs.

in cake and dessert recipes as it's stable at high temperatures.

■ **How much is OK?:** The ADI is 0–15 mg/kg bodyweight.

■ **Safety concerns**

This sweetener has been cleared of early concerns over its effects on the thymus glands. It was approved in Australia in 1993 and in the US in 1998, but has been waiting for approval in the EU for the last three years.

Alitame

■ **Additive code number:** 956.

■ **Derived from amino acids;** approved in 1993.

■ **Brand names for tabletop sweeteners:** None found. Also known as Aclame.



Good for your diet and your teeth?

■ **Weight loss:** Nearly a third of people who eat artificially sweetened food or drink in Australia do so for health or weight reasons. However, there's no long-term evidence that intense sweeteners are effective in weight control. Overall, we're still putting on more weight despite soaring sales of artificial sweeteners.

It appears they're not acting as sugar substitutes, but rather in addition to sugar use. Evidence from the UK, for example, shows that the sales of diet soft drinks don't replace sales of regular soft drinks. At the same time obesity has increased — perhaps some people think because they're consuming a 'diet' product they can eat or drink as much as they like. There's also evidence that eating artificially sweetened food makes you feel like eating more.

■ **Tooth decay:** You might think you could have more artificially sweetened food and drinks than those sweetened with sugar without damaging your teeth. But in the case of soft drinks, there's concern over the acid in them too, as many experts believe this contributes to tooth erosion.

■ **Sweetness:** 2000 times sweeter than sugar.

■ **Main sources:** Alitame is approved for use in a wide range of food and drinks in Australia, such as biscuits, cakes, pastries, soft drinks and confectionery, but it's currently used in just a very few products, often in combination with other sweeteners.

■ **How much is OK?:** The ADI is 0–1 mg/kg bodyweight. As alitame isn't used in many foods, you're unlikely to exceed this.

■ **Safety concerns**

While alitame remains to be approved in the US and Europe, an ADI of 1 mg/kg was set in 1996 by a World Health Organization committee.

Meanwhile, in 1995 Australia became the first country in the world to approve its use in a wide range of foods, while the US FDA requested that a second long-term rat study be conducted. This study has now been concluded and ANZFA has received a report on it for evaluation.

Thaumatin

■ **Additive code number:** 957.

■ **The only intense sweetener** so far approved that is a natural plant extract; approved in Australia in 1985.

■ **Brand names for tabletop sweeteners:** None found. Also known as Talin.

■ **Sweetness:** 2000–3000 times sweeter than sugar, with a licorice-like aftertaste.

■ **Main sources:** It's permitted in relatively few products, such as low-joule foods and brewed soft drinks.

■ **How much is OK?:** An ADI isn't specified.

■ **Safety concerns**

There's no evidence of any harmful effects from thaumatin, though it's permitted in very few products in Australia and used in even less. There's no specified ADI because it's deemed to have a good safety profile. □

CHOICE THINKS:

■ The scientific evidence on the safety of most artificial sweeteners is inconclusive, and regulators have to use their judgment when deciding whether to allow them to be used. Studies are often sponsored by manufacturers and not always published and publicly available. With this background, it makes sense to vary the sweeteners in what you eat and drink and to keep an eye on the total amount.

■ The amount of any sweetener in a product should be listed on the label, not just its presence. Currently it's very hard to know how much of any sweetener you're consuming every day and whether you might be getting close to its ADI.

■ Food additives like sweeteners should be licensed for a limited period — say 10 years — to ensure safety assessments use up-to-date scientific evidence.

Fridges

With 10 frost-free, medium-sized fridges on test that are suitable for a small family, we found getting the temperature controls to the right setting can still be very fiddly.

WHAT MAKES A GOOD FRIDGE stand out from the rest? It should be adequately roomy, easy to clean, quiet and efficient. But above all, it should get on with its job — keeping your food at the right temperature — without you having to constantly fiddle with the controls.

Temperature performance

Only the FISHER & PAYKELS and the KELVINATOR produced appropriate temperatures in both compartments when set on 'mid' (which is where most people would probably set their new fridge), though the KELVINATOR didn't perform well in other areas. Three models were particularly bad: the fresh-food compartment was too warm in the HOOVER Contour HE365UF and too cold in the WESTINGHOUSE, while the NEC freezer was much too cold.

You can alter the controls yourself, but the normal thermostat-and-baffle arrangement between the two compartments makes temperature control almost an artform (see *Optimising your fridge's temperature*, CHOICE, November 1998, for more on this). Letting the fridge control temperatures electronically, as with the FISHER & PAYKELS, is much easier.

All fridges go through cycles of cooling and resting, so some temperature fluctuation is inevitable. You'd hope it would be minor, but that's not the case with the NEC, DAEWOO and WHIRLPOOL. Something like ice cream, for example, would over time form ice crystals on its surface. It'd still be safe to eat, but you might not like the gritty texture.

The temperature outside the fridge affects the temperature inside, but do you really want the hassle of resetting your fridge from season to season?

Only the FISHER & PAYKELS coped well with a change in external temperature and shouldn't need resetting for winter. DAEWOO and NEC recommend using their winter settings when the outside temperature drops to 10°C. But this isn't satisfactory — both fridges warmed dramatically before the thermometer



fell that far, with the lower outside temperatures seeming to lull them into a false sense of security.

FISHER & PAYKEL boasts that you can just "set and forget" its controls and the two models in the test did bear this out, although their freezers were a little warmer than the manufacturer claimed.

Cooling speed

There was a substantial variation in the cooling times the fridges achieved for a load of food put into the fresh-food compartment, from less than three hours (FISHER & PAYKEL Active Smart E381T) to more than five and a half hours (LG). This is a tough test, in which the fridge has to cool a large amount of food. But it's realistic — you might well load your fridge up just before a party, and a slower fridge could be a real problem.

You can speed up the cooling process for small quantities of food by placing it in the chiller or a colder part of the fridge. Unlike cyclic-defrost fridges, the coldest area in a frost-free model often tends to be near the air outlets. If, for example, they're near the top shelf, the bottom shelf may be the warmest area.

IN BRIEF

■ Want a fridge that'll always keep your food at the right temperature without you having to fiddle with the controls? Most models won't give you that luxury. The FISHER & PAYKELS are better than the rest, with their electronic controls.

■ Running costs can be significant: one of the largest models in the test, the WHIRLPOOL, uses the least energy. Over 10 years, it could cost \$250 less to run than the least efficient model, the NEC.

WHAT TO BUY

FISHER & PAYKEL Active Smart E381T (freezer on top)	\$1149
FISHER & PAYKEL Active Smart E372B (freezer on bottom)	\$1149
HOOVER Contour HE365UF (freezer on bottom)	\$1195
HOOVER Contour HE383TF (freezer on top)	\$1099
WHIRLPOOL WRN42RWG6 (freezer on top)	\$999

This is the third test recently in which electronic models (the two FISHER & PAYKELS) have come out on top. They're very good fridges, but there are drawbacks — they're relatively expensive and don't have chillers.

The two HOOVER models have been discontinued (see *What's happening to Hoover?*, page 36, for details), but may still be available in some shops.

What's happening to Hoover?

Email (manufacturer of the Westinghouse, Kelvinator and Simpson brands) recently acquired Southcorp's whitegoods businesses, including the Dishlex, Chef and Hoover brands.

At the time of writing, we were given to understand that all Hoover fridges had been discontinued, including the models that came third and fourth in this test. However, you may still find them in stores if you think they're just right for your needs.

Email says it will honour guarantees, stock spares and manage the established network of service people for Hoover fridges. For more information, see *Appliance shake-up*, CHOICE, July 1999.

Not all crispers are equal

A crisper's a crisper, you might think, but our tests showed crisper design is important. Three models (both FISHER & PAYKEL and the HOOVER Contour HE365UF) have very good crispers and will keep even unwrapped vegetables fresh for some time.

But four other models (the HOOVER Contour HE383TF, LG, WESTINGHOUSE and NEC) were disappointing. An unwrapped lettuce could be dried out after a few days in these crispers.

■ Size

Measure the available space in your kitchen, allowing at least a couple of centimetres at the sides, back and top for air circulation. Check the manufacturer's recommendations and that the door opening direction suits your kitchen or is reversible.

■ Frost-free or cyclic defrost

Frost-free fridges are almost as cheap as cyclic-defrosts these days, and are far more popular as you don't have to defrost them. But if you're cost-conscious and don't mind defrosting regularly, you might find a cyclic model that costs less, and it may be a little quieter.

■ Top or bottom freezer

Top-mounted freezers are still more popular and generally a little more energy-efficient. Bottom-mounted freezers have convenient slide-out baskets.

■ Energy efficiency

Consider long-term running costs as part of the purchase price. While the number of stars on the energy label helps in comparing models of the same size, pay particular attention to the kWh per year figure, which gives a more accurate indication.

■ Refrigerant and blowing agent

If you're concerned about the hole in the ozone layer and the greenhouse effect, ask the shop for a model that uses butane or pentane as the refrigerant and the blowing agent for the insulation foam (see note 7, page 39, for more on this).

■ Features and accessories

A **chiller** is important if you often store fresh meat and fish. It should be close to freezing and ideally have a separate temperature control. A **chill zone** close to the cold-air outlets is handy for cooling drinks quickly, but food left there too long

could freeze; some of you have told us that this can reduce the amount of usable space. Look for a well-sealed **crisper** drawer to keep vegetables fresh; check that the fridge's air outlets don't blow into it, as this will dry food out faster. A **dairy compartment** is

convenient for keeping butter or cheese slightly soft. Also look for **ice trays** and other special containers you'd find particularly useful. You could also invest in a **thermometer** to keep an eye on the temperature in your fridge. Ideally the fresh-food compartment should be below 4°C and the freezer below -15°C (-18°C is recommended for many foods).

■ Shelves and layout

Make sure you can arrange the shelves easily and without wasting space to accommodate your groceries, including tall items and bottles. If the fridge will be in a corner, make sure you can remove its shelves with the door open at a 90° angle.

■ Moving and cleaning

Look for rollers for easy moving, and brakes to keep the fridge in place. Check for smooth, easy-to-clean surfaces and avoid models with dirt traps. It'll be easier to find food and clean the fridge if it has a bright light.

A spring-loaded ice tray like the Whirlpool's could be useful if you use a lot of ice.

For people with a disability

An occupational therapist from the Independent Living Centre assessed the fridges for ease of use by people with a disability.

For people with poor vision

■ A good light is essential — the two HOOVERS were best. The FISHER & PAYKEL, DAEWOO and NEC controls may be difficult to read.

For people in wheelchairs

■ A bottom-mounted freezer tends to make using both compartments easier. The temperature controls of most top-

mounted freezers are hard to reach from a wheelchair, but the KELVINATOR is an exception.

■ Handles running vertically down the side of the door are easier to use.

For people with a bad back

■ If you use the freezer a lot, you may prefer it on top, to minimise bending. If you don't, go for a bottom-mounted freezer so that the fresh-food compartment is at a handy height.

■ Temperature controls should be easy to reach without bending.

For people with weak hands

■ Look for handles running down the side of the door — they're easier to grasp. The FISHER & PAYKEL E372B has good handles in this respect, although you need to be careful — it's easy to catch your fingers between them.

■ Temperature controls with pushbuttons and fiddly knobs can be awkward. Look for a large knob or a slide bar.

■ Make sure crisper or chiller compartments are easy to manage. The WHIRLPOOL may be a good bet as it has a catch on its chiller to prevent it from falling out.

For people with dementia

■ The warning alarm of the FISHER & PAYKEL when the door's left open can be particularly helpful.



The models in the **What to buy** list are profiled in rank order. Prices shown are a good target to aim for when shopping around, based on nationwide checks in May 1999. Anything lower is a bargain.

FISHER & PAYKEL Active Smart E381T

Freezer on top
Target price: \$1149

Good points

- Best overall.
 - Best cooling time.
 - Very good energy efficiency.
 - Very good crisper performance in freshness test.
 - It's easy to control the temperatures in both compartments.
 - Copes well with external temperature changes.
 - Equal quietest model during normal running in the test.
 - Warning beep if the door is left open.
 - Easy to clean and good storage versatility.
 - Has a fault alarm and coded display to make repair work easier.
- ### Bad points
- No chiller or special compartment for storing fresh meat or fish.

FISHER & PAYKEL Active Smart E372B

Freezer on bottom
Target price: \$1149

Good points

- Best crisper performance.
- It's easy to control the temperatures in both compartments.
- Very small temperature fluctuations during normal cycle.
- Good cooling time.
- Copes well with external temperature changes.
- Freezer baskets are easy to slide in and out on their rollers.
- Warning beep if door is left open.

- Equal quietest model during normal running in the test.
 - Easy to clean and good storage versatility.
 - Has a fault alarm and coded display to make repair work easier.
- ### Bad points
- No chiller or special compartment for storing fresh meat or fish.
 - It's easy to catch your fingers between the fridge and freezer door handles.

HOOVER Contour HE365UF

Freezer on bottom
Target price: \$1195

Good points

- Very good crisper performance.
 - Very small temperature variation between fresh-food shelves.
 - You can set the freezer to be very cold without the fresh-food compartment freezing.
 - Easy to clean and good storage versatility.
 - Rollers and brake easy to use.
 - Height can be adjusted from the front using a screwdriver.
- ### Bad points
- No chiller or special compartment for storing fresh meat or fish.
 - Relatively noisy.
 - Fresh-food compartment is too warm when set on 'mid'.

HOOVER Contour HE383TF

Freezer on top
Target price: \$1099

Good points

- Good energy efficiency.
- Good cooling time.

- You can set the freezer to be very cold without the fresh-food compartment freezing.
 - Easy to clean and good storage versatility.
 - Rollers and brake easy to use.
 - Height can be adjusted from the front using a screwdriver.
- ### Bad points
- No chiller or special compartment for storing fresh meat or fish.
 - Relatively noisy.
 - Dairy compartment is very cold.
 - Poor crisper performance.

WHIRLPOOL WRN42RWG6

Freezer on top
Target price: \$999

Good points

- Most energy-efficient fridge in the test.
 - Has a chiller (but without a separate temperature control).
 - Good cooling time.
 - Relatively quiet.
 - Convenient spring-loaded ice tray and storage container.
- ### Bad points
- No dairy compartment.
 - Mediocre crisper performance.
 - Limited shelf adjustability.
 - Moderate temperature fluctuations throughout its cycle.



Fisher & Paykel Active Smart E381T



Fisher & Paykel Active Smart E372B



Hoover Contour HE365UF



Whirlpool WRN42RWG6



Hoover Contour HE383TF

What about the rest?

- The **NEC** fresh food compartment is only cold enough when its freezer is very cold. Temperatures inside the **DAEWOO** and **NEC** vary too much with the outside temperature (see page 35), and you'd probably struggle to keep them at the right temperature all year.
- The **KELVINATOR** and **WESTINGHOUSE** were mediocre performers across the board, and the **KELVINATOR** is also relatively noisy. The **LG** took the longest to cool food in our test.

FROST-FREE FRIDGES, 340-385 L

Brand / model (in rank order)	Manufacturer / distributor	Origin	Target price (\$)*	Warranty (years)	Freezer location	Measured dimensions (H x W x D, mm)	Size (total claimed gross volume, L)	Claimed gross / usable volume, fridge (L)	Claimed gross / usable volume, freezer (L)	Shelves removable when door open 90°	Door hinge position
FISHER & PAYKEL Active Smart E381T	Fisher & Paykel	NZ	1149	1 (B)	Top	1600 x 640 x 670	380	283 / 210	97 / 73	✓	Rev (O)
FISHER & PAYKEL Active Smart E372B	Fisher & Paykel	NZ	1149	1 (B)	Bottom	1600 x 640 x 695	373	250 / 185	123 / 77	✓ (K)	Rev (Q)
HOOVER Contour HE365UF (A)	Email	Australia	1195	2 (C)	Bottom	1720 x 600 x 660	365	243 / 180	122 / 76	✓	L or R
HOOVER Contour HE383TF (A)	Email	Australia	1099	2 (C)	Top	1575 x 680 x 650	383	282 / 217	101 / 76	(L)	L or R
WHIRLPOOL WRN42RWG6	Whirlpool	Korea	999	2 (D)	Top	1760 x 670 x 660	385	266 / 215	119 / 89	(M)	R
DAEWOO Fresh Multi-Flow FDF-358	Daewoo	Korea	770	3 (E)	Top	1730 x 670 x 640	358	260 / 212	98 / 75	(N)	R
WESTINGHOUSE RJ340M	Email	Korea	899	1 (F)	Top	1700 x 610 x 670	339	237 / 196	102 / 71	(P)	R
KELVINATOR Impression Series N350D	Email	Australia	999	1 (G)	Top	1510 x 640 x 730	350	250 / 177	100 / 80	(L)	L or R
LG Express Cool GR-3725F	LG	Korea	899	2 (H)	Top	1700 x 610 x 670	339	237 / 196	102 / 71	(P)	R (R)
NEC Fresh Multi-Flow FR358	NEC	Korea	849	2 (J)	Top	1730 x 660 x 650	358	260 / 212	98 / 75	(N)	R

* Prices shown are a good target to aim for when shopping around, based on nationwide checks in May 1999.

(A) At the time of writing, we were given to understand that all Hoover fridges were to be discontinued. However, you may still find them in some stores.

(B) Repair or replace; five years repair or replace for sealed system and external surfaces for corrosion. One-year warranty on whole fridge is increased to two years if you register by mail.

(C) Repair or replace; the following three years parts only for sealed system and five years on external surfaces for corrosion.

(D) Repair or replace; the following three years parts and labour for sealed system.

(E) Parts and labour; the following two years parts only for the compressor.

(F) Repair or replace; the following four years parts only for sealed system. One-year warranty on whole fridge is increased to two years if you register by phone.

(G) Repair or replace; the following four years parts only for sealed system. Five years

repair/replace external surfaces for rusting. Frozen food indemnity. One-year warranty is increased to two years if you register by phone.

(H) Repair or replace; the following three years parts only for sealed system.

(J) Parts and labour; the following three years parts only for the compressor.

(K) Freezer baskets need more than a 90° opening.

(L) Except crisper shelf.

(M) Crisper shelf, freezer shelf and chiller drawer only.

(N) Except mid shelf in its lower position.

(P) Except chiller shelf.

(Q) This can only be done at a cost, with a service call. So before buying, specify left or right opening.

(R) LG says a reversible door will be available from July or August.

(S) No information available.

How reliable have our subscribers found them?

We asked a group of subscribers if they'd had any problems with their fridge over the previous 12 months and whether they'd buy the same brand again.

Just over one in 10 fridges had needed repair, at an average cost of \$130. The most common problem was with door seals.

The graphs show the results for those brands for which we received enough responses to report on. The number in brackets tells you how many readers reported on the brand. Note that the results are for both types of fridge, not just frost-free ones, and all sizes. They don't cover all brands on the market and they do include brands we didn't test this time.

Percentage not needing repair

Fisher & Paykel (479)	93
Frigidaire (169)	92
Sharp (73)	92
Admiral (120)	89
Hoover (184)	89
Westinghouse (1209)	89
Philips (310)	88
Whirlpool (137)	88
General Electric (228)	87
Ignis (77)	87
Kelvinator (1040)	87

Percentage who would buy the same brand again

Whirlpool (144)	94
Sharp (74)	93
Fisher & Paykel (499)	92
Westinghouse (1240)	91
Kelvinator (1072)	90
Admiral (120)	88
General Electric (233)	87
Hoover (189)	87
Frigidaire (176)	85
Philips (315)	78
Ignis (76)	75

Fridge recycling

FISHER & PAYKEL is running a collection scheme for fridges and other whitegoods on the North Island of New Zealand. Consumers can return unwanted products to participating retailers or service centres, which forward them to a recycling facility where the products are disassembled:

- The refrigerant is recovered for safe disposal.

- Steel and plastic parts are sent to recycling plants.
- The insulation foam goes to landfill.

Unfortunately, the company doesn't collect whitegoods in Australia — nor do the other manufacturers and distributors in this test. CHOICE would like to see manufacturers set up a recycling scheme for used whitegoods in Australia.

4	4	5	6	7	8	9	10	11	12	
Chiller	Dairy compartment	Noise level (dB)	Claimed / measured energy use (kWh / year)	Hydrocarbon refrigerant / blowing agent	10-year running costs (£)	Cooling time (hrs:mins)	Performance score (%)	Ease of use score (%)	Overall score (%)	Brand / model (in rank order)
✓	✓	37	560 / 623	- / ✓	748	2:50	85	76	81	FISHER & PAYKEL Active Smart E381T
✓	✓	37	660 / 702	- / ✓	842	3:45	78	77	78	FISHER & PAYKEL Active Smart E372B
✓	✓	48	662 / 697	- / (S)	836	4:20	72	75	74	HOOVER Contour HE365UF (A)
✓	✓	45	630 / 660	- / (S)	792	3:20	71	75	73	HOOVER Contour HE383TF (A)
✓	✓	37	530 / 592	- / ✓	710	3:40	76	70	73	WHIRLPOOL WRN42RWG6
✓	✓	39	680 / 687	- / -	824	3:45	69	66	68	DAEWOO Fresh Multi-Flow FDF-358
✓	✓	44	660 / 636	- / (S)	763	5:05	62	70	66	WESTINGHOUSE RJ340M
✓	✓	47	920 / 741	- / -	889	4:45	62	64	63	KELVINATOR Impression Series N350D
✓	✓	43	660 / 695	- / -	834	5:35	56	70	63	LG Express Cool GR-3725F
✓	✓	43	680 / 800	- / -	960	4:50	56	66	61	NEC Fresh Multi-Flow FR358

1 Measured dimensions

The measured dimensions include hinges and any protrusions at the back, such as the compressor. They're rounded up to the next 5 mm. This is the actual size of the fridge; you need to leave space around the top, back and sides for air circulation (check the fridge's manual).

2 Claimed gross / measured usable volume

The volume quoted by the manufacturer tells you approximately how much air space the fridge has to cool. The usable space, which we measured, tells you how much space you can actually fit food into, including shelves, door shelves, crispers and so on.

Use the volumes to get an idea of how big the freezer is compared with the fresh-food compartment, so you can choose a fridge that meets your storage needs.

3 Door hinge position

R = on the right
L = on the left
Rev = reversible

4 Features

See *What to look for*, page 36, for more on these.

5 Noise level

We measured the noise level of each fridge during normal running. They'll make more noise when, for example, the compressor kicks in and also during the defrost cycle. The design of your kitchen and the fridge's location also make a difference to the sound you'll hear, but you can use the noise levels from our test to tell which

models are noisier during normal running. New fridges, particularly frost-free ones with fans, can be noisier than some older models.

6 Claimed / measured energy use

The energy tests indicate how much energy a fridge would use in a year to maintain an acceptable temperature. The claimed kWh figures are from the energy labels, which were generally derived using the old standard. CHOICE's measured energy is based on the newer 1997 standard. In some cases (for example the two **FISHER & PAYKEL** models) the new standard will result in slightly higher figures than the old.

7 Hydrocarbon refrigerant / blowing agent

Some of the chemicals used as the refrigerant and the blowing agent for the insulation foam in fridges can be damaging to the environment. For example, all the tested models use the refrigerant R134a. If released into the atmosphere, this chemical contributes to the greenhouse effect (over 100 years, it's about 1300 times more damaging than carbon dioxide).

The blowing agent R141b used in some models also contributes to the greenhouse effect (about 600 times more than carbon dioxide over 100 years) and damages the ozone layer, if released into the atmosphere.

For both purposes, much less damaging alternatives are available: pentane and butane (both hydrocarbons). They have been used in some overseas countries (mainly in Europe) for years.

In this test, hydrocarbons were claimed to be used as the blowing agent for four models (the two **FISHER & PAYKEL**s, the **WHIRLPOOL** and the **KELVINATOR**). CHOICE urges manufacturers to

introduce hydrocarbon refrigerants and blowing agents for all their models as soon as possible.

8 Running costs over 10 years

The running cost is calculated from the energy used over 10 years, using a rate of 12 cents per kilowatt hour. A 10-year period provides a useful indication of the long-term differences between high and low energy usage — and you should be able to expect your fridge to last at least that long.

9 Cooling time

This is the time taken to cool the equivalent of a 20 kg load of fresh food by 15°C on a hot day.

10 Performance score

Three factors were included in the performance score, weighted as follows:

- Cooling time: 40%.
- Energy efficiency: 40%.
- How long the crisper would keep vegetables fresh: 20%.

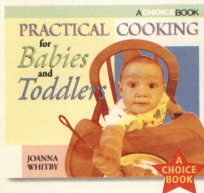
11 Ease of use score

The ease of use score consists of:

- Versatility of food storage, including adjustability of shelves and ease of storing items of different shapes and sizes: 60%.
- Ease of cleaning: 30%.
- Ease of understanding and operating temperature controls: 10%.

12 Overall score

The scores for performance and ease of use each make up half of the overall score.



Practical Cooking for Babies and Toddlers

This is where to find more than 100 delicious recipes for babies and toddlers. Using a minimum of ingredients and step-by-step practical instructions, recipes are given for breakfasts, light and main meals, vegetables and sauces, desserts, snacks and party foods.

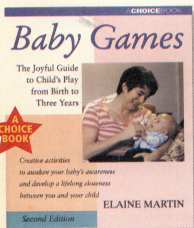
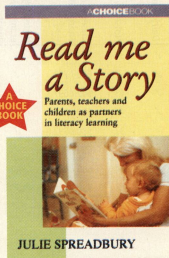
This book also includes information about nutrition and hygiene.

\$20 Code: PCFB

Read Me A Story

Read Me A Story explains simply how parents and teachers can work together with children to foster not only literacy learning but also a love of books and reading. It looks at the importance of parents as children's first teachers, emphasises the need for interaction between adult and child when reading aloud in the home, and gives parents and teachers practical ways to link home and school to encourage reading.

\$13 Code: RMAS



Baby Games

Playing with your baby creates special bonds of love, communication and caring that will last a lifetime. As your child grows from infant to toddler to preschooler, *Baby Games* offers rhymes, songs, finger plays, activities and games to help create a magical childhood. It's your guide to playing joyfully with your child.

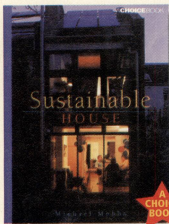
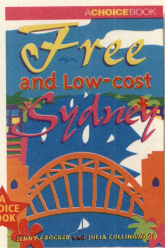
\$20 Code: BGC8

Free and Low-cost Sydney

"This wonderful book... has ideas for both adults and children and it ranges across Sydney's bumpy but beautiful cultural landscape, both ethnic and geographic." *The Sydney Morning Herald*.

Each entry includes contact numbers (and web addresses), opening hours, addresses, charges (if any), maps and tips on transport for activities outside the CBD.

\$15 Code: FLC5



Sustainable House

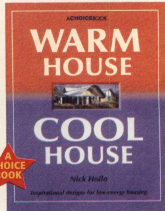
Learn how a Sydney family renovated their terrace in the centre of Sydney to make it environmentally friendly and almost completely self-sustaining in water and electricity while still being a comfortable family home. *Sustainable House* includes practical advice for home owners, builders, architects and councils, a list of contacts and suppliers, and is extensively illustrated.

\$35 Code: SUSH

Warm House Cool House

This is a comprehensive guide to low-energy house design for all climatic regions in Australia. It includes over 110 inspirational and beautiful Australian examples, plus colour photographs and house plans, and offers practical advice.

\$30 Code: WHCH

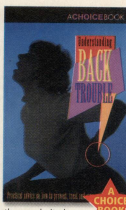


Understanding Back Trouble

Back problems affect more and more Australians every year. There's a variety of treatments, but what one person swears by, another may find useless.

Understanding Back Trouble looks at the treatments available and explains what they are and how they work. It also explains how your back works, what can go wrong and how to prevent injuries.

\$18 Code: UBT

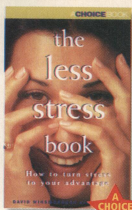


The Less Stress Book

The Less Stress Book is a down-to-earth, practical guide to coping with, surviving and even flourishing on everyday stress.

It includes explanations, case studies, checklists and exercises to help you manage stress.

\$16 Code: LSB

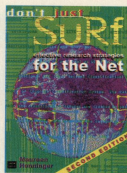


Don't Just Surf

Now in its second edition, this practical and easy-to-understand guide will help you find your way around the Internet and use it to its full potential.

Written in plain English with little jargon, and filled with useful tables and meaningful screenshots, *Don't Just Surf* is useful for both newcomers and old hands on the Internet.

\$17 Code: DJ5



How to Buy a Computer, 3rd edition

This completely revised edition contains all the information you need when buying a computer.

It offers advice on: whether you need a computer, what you can do with one and what to do when you go shopping for one. *How to Buy a Computer* also has a checklist to take with you when shopping and a useful glossary of computer terms.

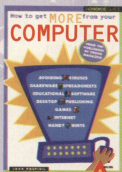
\$10 Code: HBC3



How to Get More From Your Computer

This book can help you make better use of your computer. In an easy-to-read style, it provides useful hints on how to set up your computer and associated hardware so that it's comfortable and easy to use, an overview of available software; instructions to help you upgrade your computer; and advice on how to keep your hard disk in order, make sure you have room to run new software and to save your work.

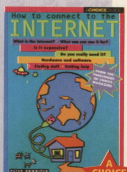
\$10 Code: HGMC



How to Connect to the Internet

This guide is a handy introduction to getting around the Internet. Whether you want to use it for business or pleasure, this guide will point you in the right direction. It includes information about what the Internet is, how to connect to it, what you can use it for and how to get around it.

\$10 Code: NET



OR BUY ALL THREE FOR \$24

Code: COMP

Order Form

Code	Title	Qty	Item price	Total price

Plus postage and handling (\$4 for one item plus \$1.50 for each extra item)

Total

Send your payment to: Australian Consumers' Association,
57 Carrington Road, Marrickville 2204 • Phone (02) 9577 3399 • Fax (02) 9577 3355
World Wide Web address: www.choice.com.au

Money-back guarantee: If you are not completely satisfied with your purchase, return book(s) within 30 days for full refund of the purchase price.

I enclose ☐ cheque ☐ money order (payable to the Australian Consumers' Association)

or, I wish to pay by: ☐ Bankcard ☐ Mastercard ☐ Visa
☐ Amex ☐ Diners Club Expiry ____ / ____

Card number _____

Name on card _____ Signature _____

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CB/9908

Good Advice

You can test drive a car, visit a house before buying it and try on a new outfit in the shop ... but how do you check a financial adviser before you invest? *Good Advice* will provide help.

It raises useful questions and includes appraisal checklists to help you select the best adviser for your situation. Austin Donnelly has drawn on over 45 years of experience to prepare a book that will help you assess the quality of financial advice before acting on it.

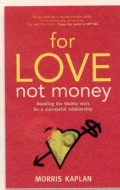
\$17 Code: GDAD



For Love Not Money

Morris Kaplan uses case studies, management plans and exercises to explain how important it is to know your 'money personality' and to use this knowledge to control your finances while keeping a successful relationship. Issues covered include: who controls the money in a relationship, how to develop good 'money talk' communication skills, the special financial problems encountered by blended families and how to handle issues of money and children.

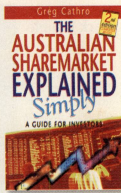
\$19 Code: FLNM



The Australian Sharemarket Explained Simply

This book will help you understand how Australian sharemarkets work. It includes invaluable information about how to make buying and selling decisions, and what sort of fees, charges and returns you can realistically expect. In an easy-to-read style, with concise chapters, it'll assist you when selecting stocks and structuring your portfolio, and help you to make a realistic assessment of how much of the investment process you should undertake yourself.

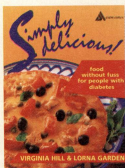
\$20 Code: ASES



Simply Delicious!

Everyone wants to eat delicious healthy meals — but it's particularly important for people with diabetes. *Simply Delicious!* is full of delicious yet simple recipes for everything from breakfasts to salsas, pasta to puddings. Each recipe includes a nutrition panel giving the amount of fat, sodium and carbohydrate per serve, and calorie and kilojoule counts. Endorsed by Diabetes Australia.

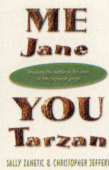
\$25 Code: SDEL



Me Jane You Tarzan

Many books have been written about the differences between the sexes, but this one is refreshingly different, as it's neither patronising nor sexist. *Me Jane You Tarzan* offers clear explanations about, and strategies to deal with, the different ways in which men and women communicate, particularly in the workplace. It gives practical advice for both sexes about how to overcome these differences in a variety of situations, including interviews, performance appraisals, management interactions, and many other work situations.

\$25 Code: MJYT



Help Yourself to Happiness

This book offers a commonsense approach to achieving a balanced and happy outlook on life. It will help you to evaluate your happiness goals and how you can attain them. Often we aim for happiness but reality falls short of expectations. The advice in this book will help you decide what's working in your life and what you may need to reassess.

\$20 Code: HYTH



Who'd be a parent?

Parents have to cope with many changes over the years. This book can help. It includes case studies from the author's practice and gives useful advice plus a wonderful selection of 'bush remedies' from parents who have been in the same position as you might find yourself now.

\$20 Code: WBAP



Royal Children's Hospital Children's Hospital Safety and First Aid Book

You walk into your backyard and find your child on the ground, unconscious — what do you do? Or you're at a playing field and one of the children falls and breaks an arm — what do you do? These and many other common situations are covered in this concise first aid book from the Safety Centre of the Royal Children's Hospital, Melbourne. Empower yourself with basic knowledge that could help you save a child's life.

(Please note, although this book offers excellent advice, nothing can replace proper first aid training.)

\$17 Code: RSFA



How to Stay Sane in Your Baby's First Year

Based on the experiences of the staff of Tresillian Family Care Centres, *How to Stay Sane in Your Baby's First Year* covers all the major developmental stages and common problems that parents will need to handle in their child's early months.

\$18 Code: SSBY



Cordless drills

You can buy a relatively cheap cordless drill with a fair bit of grunt and good battery life. And charging times are now close to an hour for many models.

WHEN YOU'RE OUT SHOPPING for a cordless drill, the main information you have to go on is brand, price and voltage. But you need to know more than that for a reliable indication of a drill's overall usefulness: how well it performs, its battery capacity, the time it takes to recharge the battery and how easy it is to use; and that's what we tested.

Performance: power plus battery capacity

A drill's *power* helps determine *how fast* it will drill holes, and its *battery capacity* helps determine *how many* holes it will drill or screws it can drive in before the battery runs out.

■ Power

A drill's power (expressed in watts) is a combination of speed and torque, and will be a major factor in determining how easily it drills holes. Nominal voltage (which a salesperson might point to) isn't a good indication of power — for example, the RYOBI CC182VR and RYOBI CC218VS are both 18 V, but the CC182VR delivers more power (see the table on page 47 for details).

■ Battery capacity

Capacity — how much work you'll get out of one charge — is largely determined by the voltage and ampere hours (Ah). Batteries on the drills we tested ranged from 9.6–18 V and 1.0–1.5 Ah. Although generally in our tests we found the larger the capacity, the better the endurance, this wasn't always the

case. The high-capacity OZITO, for instance, didn't score very well for endurance when drilling or screw-driving.

Recharging the battery

Another important consideration when choosing a cordless tool is how long the battery takes to recharge. Two of the models we tested can take as long as five hours, which could be very inconvenient. One option is to buy a spare battery so that when you're doing a big job you can have it charged and ready to use when the first one runs out. However, the extra expense of \$55–\$130 may put you off.

The two AEG models, the BOSCH PSR 14.4 VES-2 and MAKITA all have a relatively fast charging time (around an hour) and a reasonable capacity.

WHAT TO BUY

RYOBI CC182VR	\$179
BOSCH PSR 14.4 VES-2	\$199
AEG BS2E 12 T BPB	\$240

Best overall was the RYOBI CC182VR, which stands out with a very good score for performance but is let down by its ease of use: it takes a relatively long time to recharge, is heavy and isn't as easy to operate as most of the others.

The BOSCH PSR 14.4 VES-2 gives a good compromise between performance and ease of use, and could be the ideal choice for the occasional home handyperson. The AEG BS2E 12 T BPB is good for screwdriving and is easy to use.



IN BRIEF

■ Don't be fooled by the advertising or the numbers in some of the drills' model names — voltage alone won't tell you much about a cordless drill's overall performance.

■ Look for a model with a battery that takes around an hour to charge. If it takes much longer than that, it'll be very inconvenient if the battery runs out in the middle of a job — and a spare battery is expensive.

■ Cordless drills aren't as powerful or versatile as mains-powered models, so if you're only going to have one drill and want to do substantial jobs with it, you may be better off with a mains-powered one (see *Cordless or mains-powered drill?*, page 46).

WHAT TO LOOK FOR

Keyless chuck

Drills used to come with a chuck key, used to tighten and loosen the drill's jaws around the bit. Nowadays, keyless chucks are

more or less standard. To open or close the jaws, you hold one section of the inbuilt chuck with one hand while rotating the other with the other hand. It's not only less fiddly, but also means you won't spend half an hour looking for a lost chuck key.

All the drills we tested have keyless chucks. The **BOSCH**s have what it calls auto-locking chucks (see left), which are particularly easy to use: the drill locks and you only need one hand to open and close the chuck.

Speed control

All the drills we tested have a trigger for variable speed control. In addition to this, many drills have two gears or speed ranges. This means you can use the lower speed range for screwdriving or drilling large holes, and the higher speed range for general drilling (see photo, right). The **BLACK & DECKER** and **MAKITA** drills we tested have only one speed.

Reverse action

All the drills tested have a reversing action that rotates the drill anti-clockwise. This is useful for removing screws, and also drill bits jammed in the hole. For convenience you should be able to operate the reversing switch with the same hand that's

holding the main handle — the **MAKITA** proved quite difficult for left-handers.

Brake

An electric brake stops the drill instantly when you let go of the trigger. This is very handy when you're screwdriving as well as being a good safety factor. All the models we tested have an automatic brake.

Weight, size and balance

Comfort is very important if you're using the drill for long periods. When you're in the shop, pick it up and hold the trigger. Make sure the handle is comfortable: not too big and no sharp edges (especially near the trigger). While the weight of the drill is important, good balance (which means you're not struggling to hold it at the angle you need) can overcome extra weight, and make it feel quite comfortable.

Controls

The controls for speed, reversing and torque should be easy to operate, preferably with one hand, but not so easy that they accidentally slip while in use.



Gone are the days of searching for the chuck key to change the drill bit — all the drills tested have a keyless chuck (above). But the auto-locking chuck on the Bosch models (top) makes it even easier.



A lower speed is useful for starting off a screw, changing to a higher speed once it starts to 'bite'.

Battery charger

Look for a battery charger that takes about an hour (see *Recharging the battery*, page 43, for more on this). Also look for one with an indicator light that lets you know when the battery is fully charged.

Battery

The battery pack should be well secured but easy to release (see photo, below). Some of the batteries on drills we tested are difficult to remove because of their size (it's difficult to reach both release buttons with one hand) and the release mechanisms are quite stiff.

A spare battery can be useful: you can charge it and have it ready for use when the one you're using runs out. The **BOSCH GSR 9.6V** and **MAKITA** we tested came with a spare battery, and the **AEG** models can be bought in a set with a spare (see *Similar models*, page 46). Spare batteries can be bought separately for other models, and range from around \$55–\$130. You may be able to buy a spare battery with a greater capacity than the original — the voltage is the same but its amp rating is higher. This means you should get more use out of the drill between charges, but its power won't be affected.



Cordless drills are profiled in rank order from left to right. The prices shown are a good target to aim for when shopping around, based on nationwide checks in April and May 1999. Anything lower is a bargain.



RYOBI CC182VR

Target price: \$179

Good points

- Very good for all aspects of performance: the top scorer by a large margin (see column 10 in the table overleaf).

Bad points

- Takes three hours to charge.
- It's heavy to hold and its large handle is especially awkward for people with small hands.
- No onboard bit storage.
- Doesn't come with a carry case.



BOSCH PSR 14.4 VES-2

Target price: \$199

Good points

- Rated third for performance (see column 10 in the table).
- The drill's switches and controls are easy to use.
- Battery charger is easy to use and charges in around an hour.
- Auto-locking keyless chuck (see *What to look for*, left, for more on this).

Bad points

- The battery pack is difficult to remove.
- Doesn't come with a carry case.



AEG BS2E 12 T BPB

Target price: \$240

Good points

- It's easy to use and good for people with small hands.
- The charger is easy to use and charges in around an hour.
- Comes with a halogen torch (which can be used with the drill's battery pack).
- One of the quietest drills.
- The battery can be attached in different positions to improve accessibility to areas you're working on.

Bad points

- Its performance score is only OK.

If none of the three in the *What to buy* list sounds ideal for your needs, check the following profiles for performance and features that might suit you.



AEG BS2E 9.6 T BPB

Target price: \$189

Good points

- Best overall for ease of use: both drill and charger are easy to use.
- Good for people with small hands.
- Charges in around an hour.
- Comes with a halogen torch (which can be used with the drill's battery pack).
- One of the quietest drills.

Bad points

- Its performance score is only OK.



MAKITA 6222D WE

Target price: \$219

Good points

- Good score for ease of use: the lightest drill in the test, and good for people with small hands.
- Comes with a spare battery.
- The charger is easy to use and charges in around one hour.

Bad points

- Its performance score is only OK.
- Only one speed setting.
- The reverse switch is in an awkward position, particularly for left-handed people.
- No onboard bit storage.

What about the rest?

■ The AEG BS2E 9.6 T BPB, MAKITA 6222D WE, the BOSCH PSR 9.6 VES-2, 12 VES-2 and GSR 9.6 V, and the OZITO CD-144K2 are all much of a muchness, with performance that's only OK but reasonable ease-of-use scores. The AEG scored slightly better than the others for ease of use and the MAKITA for performance. We've profiled these two in case none in the *What to buy* list seems ideal for you, but it could be worth checking out the other four as well.

■ The RYOBI CC182VR and BLACK & DECKER were much too hard to use.

							1	2	3	4	5
Brand / model (in rank order)	Manufacturer / distributor	Origin	Target price (\$)*	Warranty (years)	Weight (kg)	Battery voltage	Carry case	Spare battery	Battery disposal score		
RYOBI CC182VR	Ryobi	Taiwan	179	1	2.0	18.0					✓
BOSCH PSR 14.4 VES-2	Bosch	Switzerland	199	1 (B)	1.7	14.4					✓✓✓
AEG BS2E 12 T BPB	Atlas Copco	Taiwan	240	1	1.7	12.0	✓				✓✓
AEG BS2E 9.6 T BPB	Atlas Copco	Taiwan	189	1	1.5	9.6	✓				✓✓
MAKITA 6222D WE	Makita	China	219 (A)	1	1.4	9.6	✓	✓			✓✓
BOSCH PSR 9.6 VES-2	Bosch	Switzerland	159	1 (B)	1.5	9.6					✓✓✓
BOSCH PSR 12 VES-2	Bosch	Switzerland	189	1 (B)	1.6	12.0					✓✓✓
BOSCH GSR 9.6V	Bosch	Switzerland	239 (A)	1 (B)	1.5	9.6	✓	✓			✓✓✓
OZITO CD-144K2	Ozito Industries	China	139	2	1.9	14.4	✓				✓
RYOBI CC218VS	Ryobi	Taiwan	190	1	2.0	18.0					✓
BLACK & DECKER PS3700K	Black & Decker	China	169	2	2.0	18.0	✓				✓

Battery business

Most cordless drills — and all those we tested — have nickel-cadmium (NiCad) batteries, which can be recharged from 300 to 1000 times. To get maximum life out of them, run them down completely before recharging them.

When the battery is spent, don't just throw it away — the highly toxic cadmium can contaminate soil and groundwater. Most manufacturers will take back spent batteries for recycling.

We surveyed the manufacturers of all the drills we tested, and the best in terms of battery take-back schemes was **BOSCH**: if you take the spent **BOSCH** battery to a retailer, you'll get a 10% discount on a new one. (**MAKITA** gives retailers a \$5 rebate for each battery they collect, but isn't sure whether the money is being passed on to consumers.) The rest we surveyed will accept batteries returned via retailers (which is probably easier for you) or posted to their head office.

Some manufacturers are starting to use nickel metal hydride (NiMH) batteries in some of their models. These batteries are less environmentally damaging, don't need to be drained like the NiCads, and they have a higher capacity and working time per charge. However, they're more expensive and can't be recharged as many times.

CHOICE would like to see all manufacturers offer a financial incentive for consumers to return spent batteries, and supports the introduction of NiMH batteries.

Similar models

- The **AEG BS2E 12 T BBPB** is identical to the **BS2E 12T BPB** tested, but the set includes a spare battery.
- The **AEG BS2E 9.6 T BBPB** is identical to the **BS2E 9.6T BPB** tested, but comes with a spare battery.

1 Weight

The heavier a drill is, the more tiring it can be to use, although good balance can compensate for extra weight (see *What to look for*, page 44).

2 Battery voltage

Cordless drills are often sold on the basis of their voltage, but other factors determine how well the drill will perform — see page 43 for more on this.

3 Carry case

A carry case can be very useful for protecting your drill, and also to help you keep all the pieces together. There should be a space to keep drill bits, charger and a spare battery too.

4 Spare battery

These models come with two batteries. A spare battery is useful because you can always have a charged battery ready to go (see *What to look for*). They are available for all models tested and cost around \$55–\$130.

Cordless or mains-powered?

Cordless drills can be more convenient than mains-powered models, particularly if you're not working near a power point — outside or up a ladder, for instance (see photo, far right).

However, they have their limitations: they're generally not as fast or powerful as mains-powered drills, you can only use them for a limited time before the battery runs out, they're not great for drilling through masonry and they're expensive. (Cordless impact drills are available, but they chew up battery power very quickly.) According to manufacturers, people use cordless drills mainly for screwdriving.

A mains-powered drill may well be a better choice if you only want to buy one drill and probably won't use it often: the hassle of fiddling around with power cords is unlikely to match the frustration of finding your cordless drill needs charging before you can use it.

6	7	7	8	9	10	11	12	
Charge time: claimed / measured (min)	Speeds in low gear (rpm)	Speeds in high gear (rpm)	Noise (dB)	Power (W)	Performance score (%)	Ease of use score (%)	Overall score (%)	Brand / model (in rank order)
180 / (C)	0-330	0-1000	74	190	92	53	73	RYOBI CC182VR
50 / 58	0-400	0-1150	77	162	71	73	72	BOSCH PSR 14.4 VES-2
60 / 65	0-300	0-900	68	96	65	76	71	AEG BS2E 12 T BPB
60 / 63	0-300	0-900	66	66	57	78	68	AEG BS2E 9.6 T BPB
60 / 67	na	0-700	74	99	63	71	67	MAKITA 6222D WE
70 / 59	0-320	0-900	71	97	55	77	66	BOSCH PSR 9.6 VES-2
80 / 105	0-400	0-1150	73	124	59	71	65	BOSCH PSR 12 VES-2
80 / 112	0-300	0-980	70	89	54	72	63	BOSCH GSR 9.6V
60 / 57	0-340	0-1200	80	62	50	70	60	OZITO CD-144K2
0-300 / (C)	1-400	0-1400	77	134	77	38	58	RYOBI CC218VS
0-300 / (C)	na	0-850	81	160	69	37	53	BLACK & DECKER PS3700K

5 Battery disposal score

Manufacturers were asked whether they take back the spent batteries for recycling. We rated their take-back schemes according to how convenient it is for you (see *Battery business*, left, for more).

✓✓✓: You can return batteries to retailers, who forward them to the manufacturer. You're also offered a financial incentive (such as a discount on a new battery) to do so.

✓✓: You can return batteries to retailers, who forward them to the manufacturer, but there's no financial incentive.

✓: You have to send the battery to the manufacturer.

6 Charge time (claimed vs measured)

We measured the time taken to fully charge the battery, and compared it with the manufacturers' stated times. The **RYOBI** and **BLACK & DECKER** chargers give no indication when the battery is fully charged, so we went by the manufacturers' stated times.

7 Speeds in low/high gear

See *What to look for* for why and when variable speed is useful.

8 Noise

Noise was measured at one metre from the drill. Not surprisingly, they're all too loud to let you have a normal conversation while you're using them, but some are definitely quieter than others.

9 Power (watts)

Power was measured at 65% of the drill's no-load speed using a dynamometer. Power is a combination of torque and speed. The greater the power, the more easily it will handle larger drill bits and go through harder materials.

10 Performance score

The performance score combines three ratings:

■ Power: 40%. The higher the wattage, the higher the score.

■ Drilling: 30%. This test and the screwdriving test (see below) determined the battery performance. With a fully charged battery, the drill was operated for about seven seconds with an applied load equivalent to drilling a large hole through a thick piece of timber, followed by an eight-second rest period. This sequence was repeated until the battery no longer had enough power to complete the cycle.

■ Screwdriving: 30%. With a fully charged battery, the drill was used to drive 25 mm screws into and out of pre-drilled MDF boards until the battery no longer had enough power to drive the screw in.

11 Ease of use score

Ease of use was assessed by looking at the following: operating controls; comfort, weight and balance of the drill; using the chuck; removing and inserting the battery pack; whether the charger indicates the battery is fully charged; and time taken to recharge.

12 Overall score

Performance and ease of use each contributed 50% to the overall score.

* Prices shown are a good target to aim for when shopping around, based on nationwide checks in April and May 1999.

na Not applicable. These drills have only one speed range.

(A) Price includes a spare battery.

(B) Warranty card states six months, manufacturer says 12 months.

(C) No indication of when the battery is fully charged, so not measurable.

In some situations a cordless drill is a godsend, but they have their limitations — see *Cordless or mains-powered?*, left.



● RECALLS & BANS

If you find a recall or ban not on our list, please let us know. Companies often rent 1800 numbers for a couple of months after the recall is announced. If the number given is no longer operating, phone the manufacturer or retailer direct.

THE PRODUCT: Ricegrowers' Co-operative Limited is recalling 1 kg packets of **Koala Brand Long Grain Jasmine Rice** coded "Best Before 22 Mar, 2000 L5".

The problem: Packs may contain foreign matter, including gravel.

What to do: Don't eat the rice. Return the product to the place of purchase for a full refund. For more information phone 1800 357 555 between 8.30 am and 5.30 pm EST.

THE PRODUCT: Scania Australia is recalling **Scania 4 Series trucks** with CB radio or mobile radio pre-installation, assembled between April J, 1998, and March 1, 1999.

The problem: The 15 A voltage converter may cause a fire in the radio shelf.

What to do: Contact your Scania dealer to get the part replaced. Phone (03) 9217 3300 for more information.

THE PRODUCT: Air Liquide Australia (trading as Pub Gas) is recalling all **C-sized carbon dioxide cylinders** despatched between August 1, 1998, and November 30, 1998, from the Wacol (Qld) filling centre. The cylinders are stamped 'Luxfer' and '2.1 kg WC' and have an Air Liquide label.

The problem: Under rough handling, the valve stem may break.

PUBLIC WARNING

THE PRODUCT: Goldair has issued a public warning about **radiant heaters**, such as the **RH1500**, produced before 1999.

The problem: Many don't incorporate a tipover safety switch. If one were to be tipped over while in use, it would continue to operate and could cause damage to floor coverings.

What to do: Goldair recommends this style of heater should only be used on a stable, flat surface, and it should be supervised, particularly in the presence of pets, children and infirm people.

If you want further information, contact Goldair on 1800 654 614.

What to do: Contact Air Liquide at Wacol to get the cylinder replaced. For further information phone (07) 3246 6371.

THE PRODUCT: Unilever Foods has recalled **Continental Rice Creations Chicken and Mushroom Risotto** family packs (300 g) marked best before 26 May, 2000.

The problem: A limited number of packets were found to contain small pieces of stone.

What to do: Return the pack to the place of purchase for a full refund. Call Unilever Foods on 1800 801 885 for more information.

● YOUR letters

(Continued from page 6)

surname was the same (when she collected the prescription, only her surname was called out).

Her doctor told her that if she had taken one more tablet, the situation could have been serious because she has a heart condition and the wrong tablets were for angina.

Isn't it the chemist's responsibility to ensure the correct prescription is given to the correct person?

Kerry Edwards
Morphet Vale, SA

Pharmacists are expected to dispense the correct medication, and when two prescriptions are being prepared for patients with the same surname, they should be doubly careful.

The Pharmaceutical Society of Australia believes it's important that the pharmacist (as distinct from any other employee in the pharmacy) hands out a medicine prescribed for the first time. And if they don't know

whether the patient has taken it before, they should ask. This way the pharmacist can ask relevant questions, if necessary, and ensure that the patient (or the person who picks up the prescription) understands what the medication is for and how it's supposed to be taken.

However, consumers too should make sure they understand the medication. Double-check or confirm the details when you collect it from the pharmacist.

Keeping up-to-date with future food

Congratulations on the article *Future food: already at a supermarket near you?* in CHOICE, May 1999, and, more to the point, your excellent work on this subject. If we believe 'we are what we eat', this, in my view, could be one of the most important issues ever to be pursued by CHOICE. Far more testing needs to be done and as an absolute minimum, all

products that have been genetically modified — whether or not they've changed nutritionally or in structure — should be labelled appropriately. Irradiated food should carry the international symbol and the words 'treated with ionising radiation'. If the food technologists and their companies are so sure there is not a problem with such products, they should be happy to wear the symbol and wording — with pride.

Keep up the good work and please keep consumers advised. The subject should be a must for updates in every issue.

Les J Heil
Mooloolaba, Qld

Worth checking shopping dockets

I recently did my shopping at a large supermarket and had some problems with the way it was scanned. The checkout operator seemed to be having trouble with the printer on the cash register. When she scanned an item, it would appear on the display of the register, but would not print. The operator then checked the

item again until it printed on the register docket.

I was concerned that the amount was being included in the total, even though it was not printing on the tape. When I raised this concern with her, she dismissed my suggestions. The total of my shopping (\$239.22) was more than I had expected, so I checked the tape when I got home. The items listed only amounted to \$217.42.

When I spoke to staff at the shop two days later, they did refund my money, but told me that they'd do it on this occasion only. I'd like to think that they'd do it on any occasion when they had charged me for items I hadn't purchased!

I have learned my lesson from this. In the past I have rarely watched the items being scanned at the register and the docket itself is generally thrown away as soon as I get home. I'll be checking everything from now on.

Annie West
Quakers Hill, NSW

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Subscriptions Cost \$

CHOICE (11 issues a year)

1 year	54.49	Personal subscription
2 years	105.45	
1 year	72.65	Company/institution
2 years	143.42	

Overseas, a one-year personal subscription costs \$66 incl. postage; \$122 for two years.
These prices are for subscriptions starting with the August 1999 issue (see below).

Consuming Interest (4 issues a year)

1 year	27.00	Personal subscription
2 years	52.50	
1 year	35.00	Company/institution
2 years	70.35	

Overseas, a one-year personal subscription costs \$33 incl. postage; \$60 for two years.
These prices are for subscriptions starting with the Winter 1999 issue (see below).

CHOICE Travel (4 issues a year)

1 year	27.00	Personal subscription
2 years	52.50	
1 year	35.00	Company/institution
2 years	70.35	

Overseas, a one-year personal subscription costs \$33 incl. postage; \$60 for two years.
These prices are for subscriptions starting with the August 1999 issue (see below).

CHOICE Health Reader (10 issues a year)

1 year	50.00	Personal subscription
2 years	98.70	
1 year	72.00	Professional/institution
2 years	140.70	

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Manager: Raja Rajagopal. **Contact:** Jeanette Dwyer on (02) 9577 3399.

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The thing that caught our eye when we came across this battery-operated innovation on the Sanyo web page is that it's Y2K compliant. Well, thank goodness for that! It's hard to imagine anything worse than having to grate cheese for the post-millennium party nachos by hand.

Of course everyone who's done their Y2K homework will know that only electronic products with a date function (like computers, VCRs, planes, automatic doors, etc) are potential victims of the Y2K bug. Somehow we just can't see cheese graters being that sophisticated.

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